

# INDEX

City  
Plate  
No.

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SAN-5	WATERTIGHT CASTING FOR SANITARY SEWER MANHOLE
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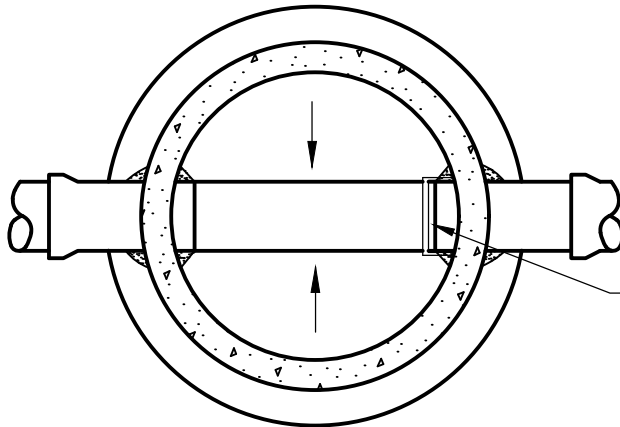


## SECTION 1 - SANITARY SEWER INDEX

LAST REVISION:  
December 2019

PLATE NO.

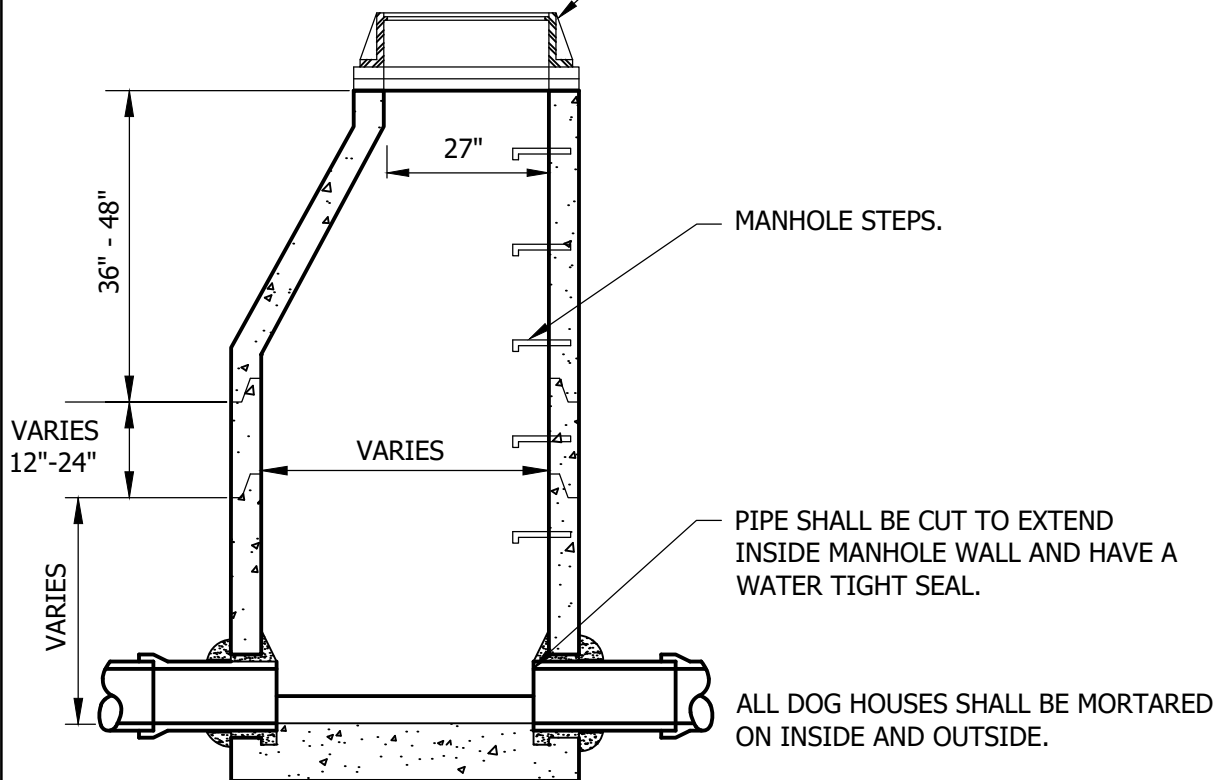
PRECAST INVERT MUST BE 1/2  
DIAMETER OF THE PIPE AND BENCHES  
SLOPED 2" TOWARD THE INVERT.



PLAN

MANHOLE STEPS SHALL BE PLACED  
SO THAT OFFSET VERTICAL PORTION  
OF CONE IS FACING DOWNSTREAM.

CASTING AND ADJUSTMENT  
RINGS.



PIPE SHALL BE CUT TO EXTEND  
INSIDE MANHOLE WALL AND HAVE A  
WATER TIGHT SEAL.

ALL DOG HOUSES SHALL BE MORTARED  
ON INSIDE AND OUTSIDE.

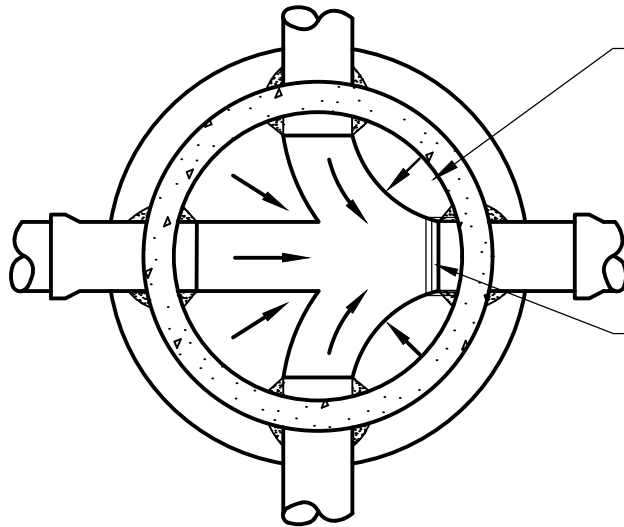
SECTION



## SANITARY SEWER MANHOLE

LAST REVISION:  
November 2019

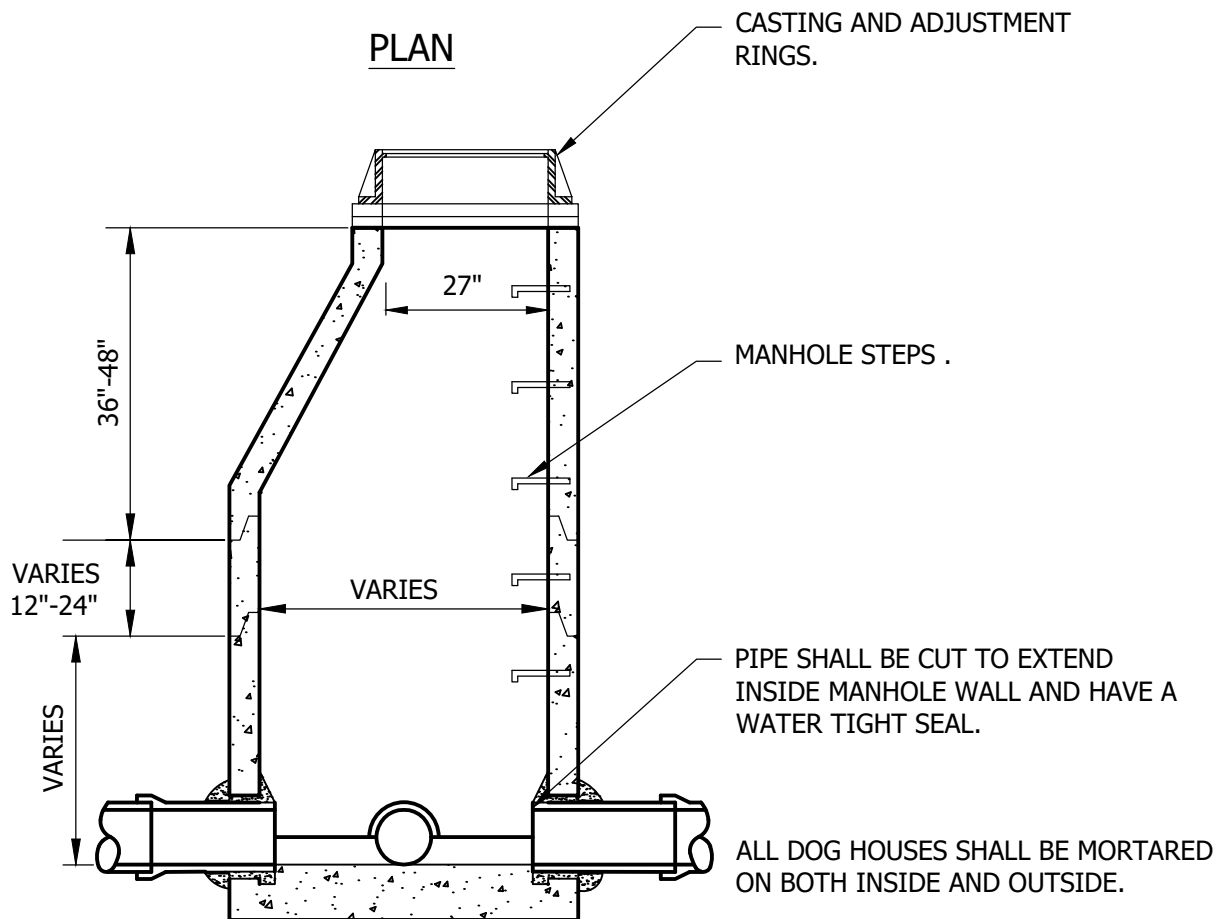
PLATE NO.  
**SAN-1**



PRECAST INVERT MUST BE 1/2 DIAMETER OF PIPE AND BENCHES SHOULD BE SLOPED 2" TOWARD INVERT.

MANHOLE STEPS SHALL BE PLACED SO THAT OFFSET VERTICAL PORTION OF CONE IS FACING DOWNSTREAM.

PLAN



CASTING AND ADJUSTMENT RINGS.

MANHOLE STEPS .

PIPE SHALL BE CUT TO EXTEND INSIDE MANHOLE WALL AND HAVE A WATER TIGHT SEAL.

ALL DOG HOUSES SHALL BE MORTARED ON BOTH INSIDE AND OUTSIDE.

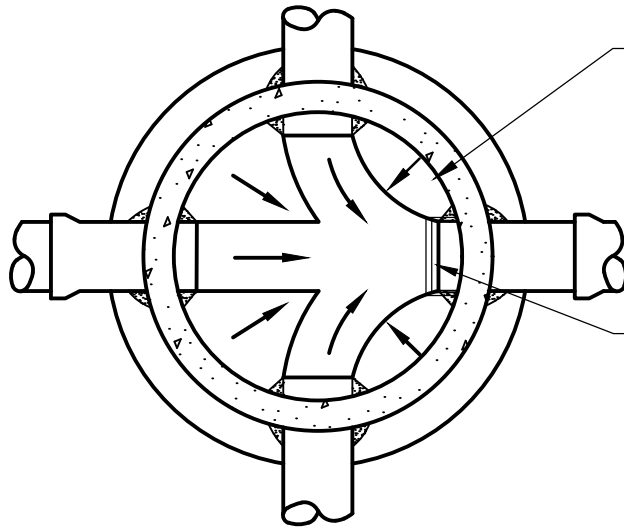
SECTION



## SANITARY SEWER JUNCTION MANHOLE

LAST REVISION:  
November 2019

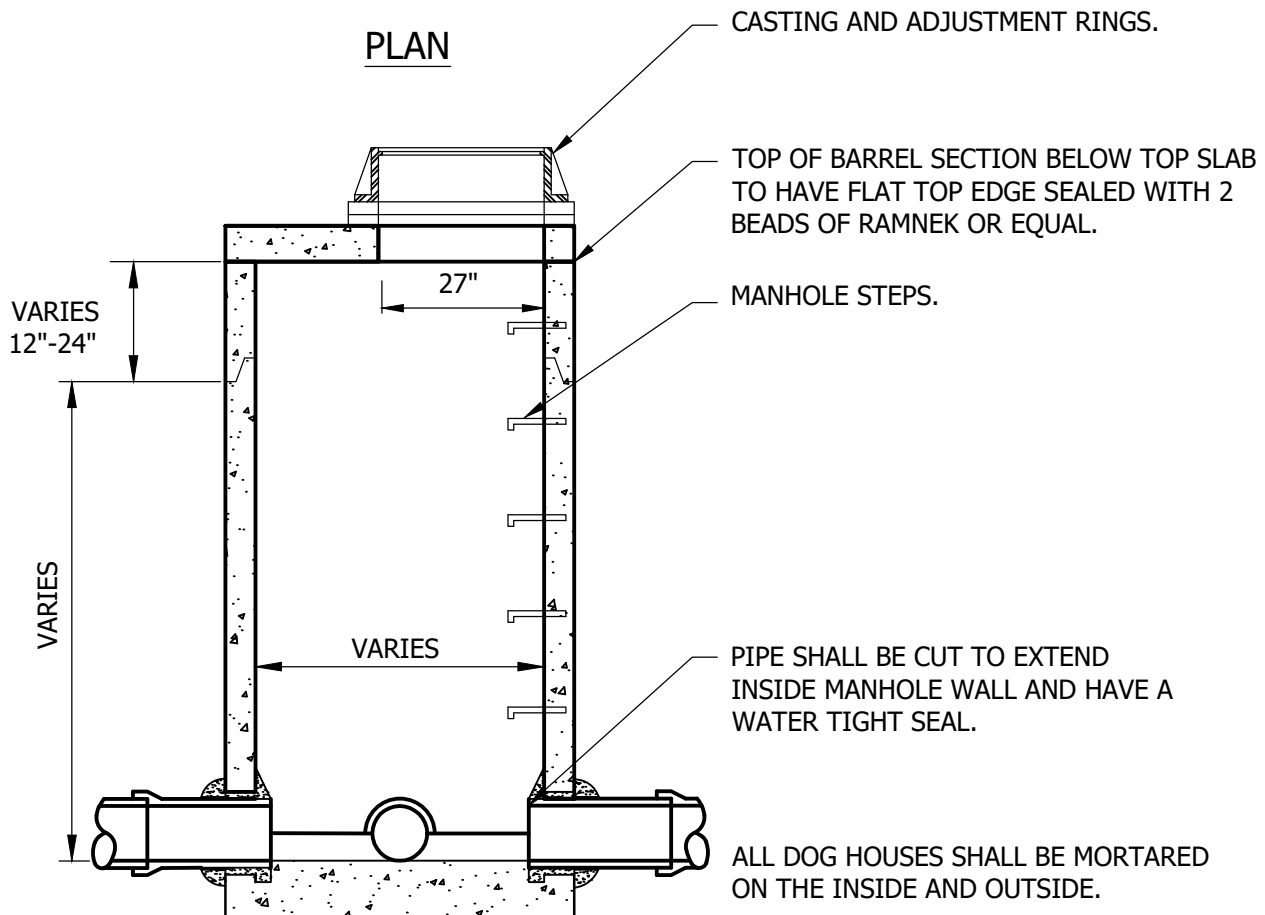
PLATE NO.  
**SAN-2**



PRECAST INVERT MUST BE 1/2 DIAMETER OF PIPE AND BENCHES SHOULD BE SLOPED 2" TOWARD INVERT.

MANHOLE STEPS SHALL BE PLACED SO THAT OFFSET VERTICAL PORTION OF CONE IS FACING DOWNSTREAM.

PLAN



CASTING AND ADJUSTMENT RINGS.

TOP OF BARREL SECTION BELOW TOP SLAB TO HAVE FLAT TOP EDGE SEALED WITH 2 BEADS OF RAMNEK OR EQUAL.

MANHOLE STEPS.

PIPE SHALL BE CUT TO EXTEND INSIDE MANHOLE WALL AND HAVE A WATER TIGHT SEAL.

ALL DOG HOUSES SHALL BE MORTARED ON THE INSIDE AND OUTSIDE.

SECTION



# SANITARY SEWER JUNCTION MANHOLE WITH REINFORCED TOP SLAB

LAST REVISION:  
November 2019

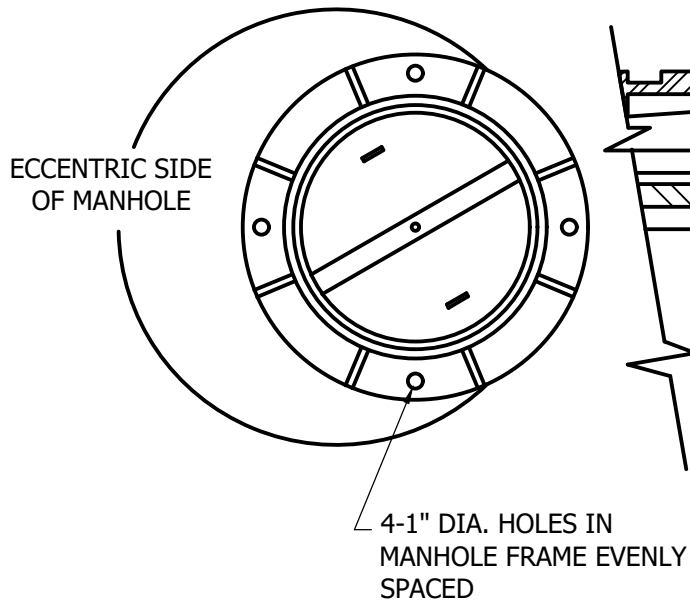
PLATE NO.  
**SAN-3**



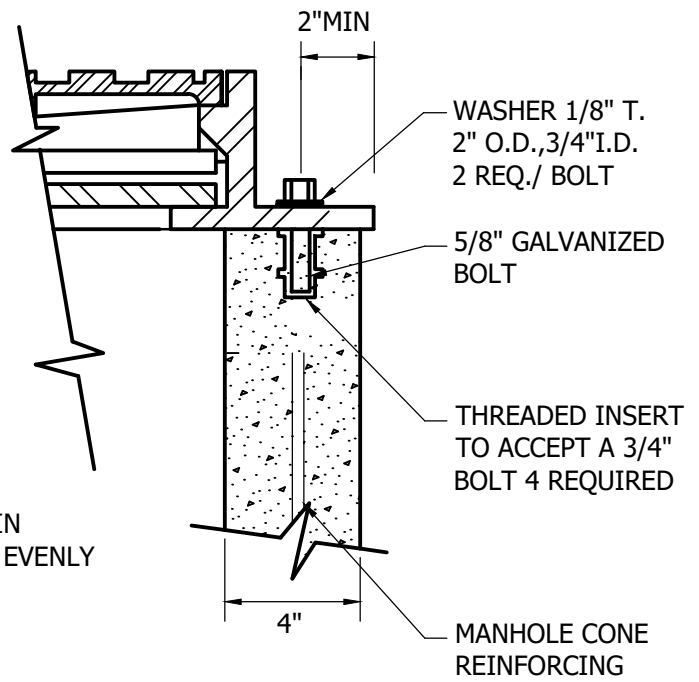


## SECTION

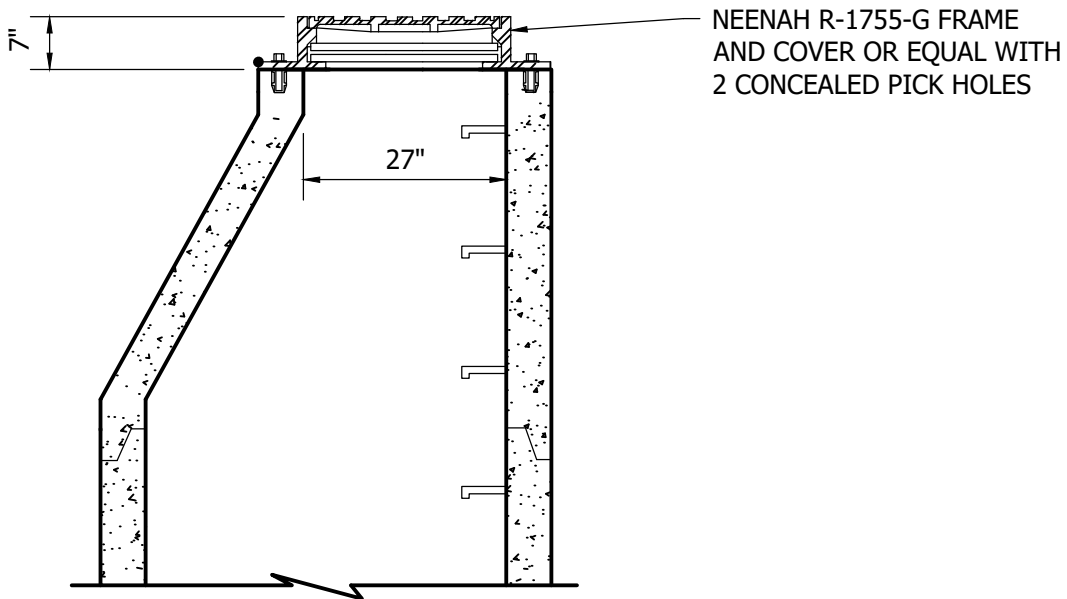




PLAN VIEW TOP  
COVER REMOVED



TIE DOWN DETAIL



ECCENTRIC  
WATERTIGHT MANHOLE



WATERTIGHT CASTING FOR  
SANITARY SEWER MANHOLE

LAST REVISION:  
November 2017

PLATE NO.  
SAN-5

CASTING AND  
ADJUSTMENT RINGS.

36"-48"

27"

4' DIA

VARIES  
12"-24"

20' C-900  
(SIZE VARIES)

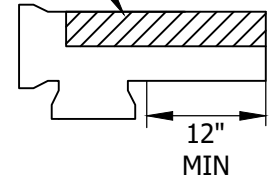
C-900 DROP  
(LENGTH & SIZE VARIES)

TEE MODIFIED  
(SEE ABOVE)

2"-3"

SECTION

CUT OFF TOP  
PORTION OF TEE



TEE DETAIL

12"  
MIN

MANHOLE STEPS.

MANHOLE TRANSITION.

HOLE FOR TEE SHALL BE 4" LARGER  
THAN PIPE SIZE TO ALLOW BELL TO BE  
POSITIONED INSIDE MANHOLE WALL.

ALL DROP MANHOLES SHALL BE LINED  
UNLESS NOTED OTHERWISE.

STAINLESS STEEL PIPE BRACKET  
(MIN. 2 REQUIRED, 5' SPACING).

90° BEND. INSTALL 0.2' ABOVE THROUGH  
INVERT. POSITION BEND TO ANGLE  
DOWNSTREAM.

ALL PIPES SHALL BE CUT TO EXTEND  
INSIDE MANHOLE WALL AND HAVE A  
WATER TIGHT SEAL.

INVERT AND BENCHES ARE TO BE  
POURED IN THE FIELD AND INCLUDE  
THE 90° BEND. INVERT SHOULD BE  
1/2 DIAMETER OF PIPE AND BENCHES  
SLOPED 2" TOWARD INVERT.

ALL DOG HOUSES SHALL BE MORTARED  
ON THE INSIDE AND OUTSIDE.



## SANITARY SEWER INSIDE DROP INLET MANHOLE

LAST REVISION:  
November 2019

PLATE NO.  
SAN-7

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City  
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## SECTION 2 - WATER MAIN

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WAT-4	BUTTERFLY VALVE AND BOX INSTALLATION
WAT-5	WATER MAIN WET TAP
WAT-6	CONCRETE THRUST BLOCKING
WAT-8	HYDRANT DETAIL W/ MEGALUGS
WAT-9	HYDRANT DETAIL WITH VERTICAL BEND & MEGALUGS
WAT-10	WATERMAIN OFFSET W/ MEGALUGS
WAT-11	INSULATION DETAIL



## SECTION2 - WATER MAIN INDEX

LAST REVISION:  
December 2016

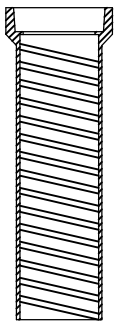
PLATE NO.



DROP LID



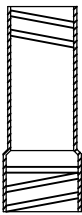
7.5' MINIMUM COVER REQUIRED  
OVER TOP OF WATER MAIN.



TOP

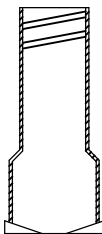
GRADE

ADJUST TOP TO 3/4" BELOW  
GRADE. BOX TO BE SET TO  
PROVIDE 12" OF ADJUSTMENT.



EXTENSION

NOTE:  
INSTALL NUT EXTENDER TO  
7' DEPTH ON ALL VALVES  
WITH OVERDEPTH

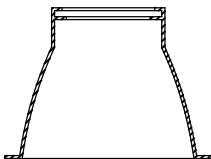


BOTTOM

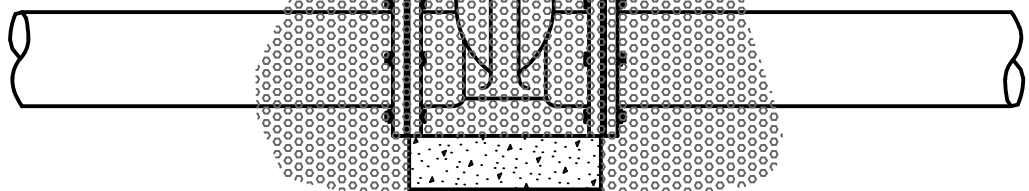
COARSE FILTER  
AGGREGATE PER  
MnDOT SPEC. 3149.2H

RESILIENT WEDGE VALVE

1/4" STEEL GATE VALVE  
ADAPTOR W/ PROTECTIVE  
COATING AS  
MANUFACTURED BY  
ADAPTOR, INC. OR EQUAL.



BASE



8" CONC. BLOCK



## GATE VALVE AND BOX INSTALLATION

LAST REVISION:  
March 2013

PLATE NO.  
WAT-3

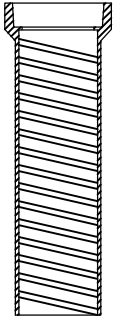


DROP LID



7.5' MINIMUM COVER REQUIRED  
OVER TOP OF WATER MAIN.

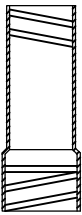
TOP



GRADE

ADJUST TOP TO 3/4" BELOW  
GRADE. BOX TO BE SET TO  
PROVIDE 12" OF ADJUSTMENT.

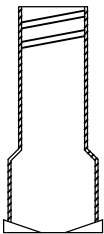
EXTENSION



1/4" STEEL GATE VALVE  
ADAPTOR W/ PROTECTIVE  
COATING AS MANUFACTURED  
BY ADAPTOR, INC. OR EQUAL.

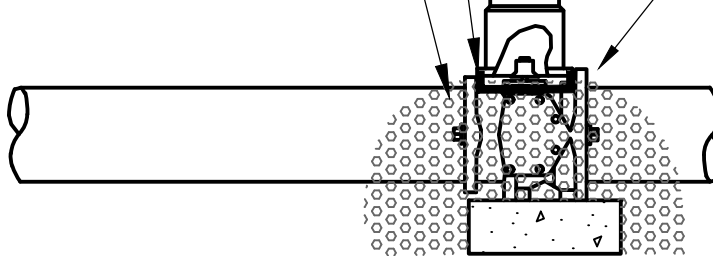
NOTE:  
INSTALL NUT EXTENDER TO  
7' DEPTH ON ALL VALVES  
WITH OVERDEPTH

BOTTOM

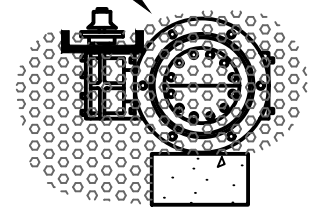


COURSE FILTER AGGREGATE  
PER MnDOT SPEC. 3149.2H

BUTTERFLY VALVE



END VIEW



8" CONC. BLOCK

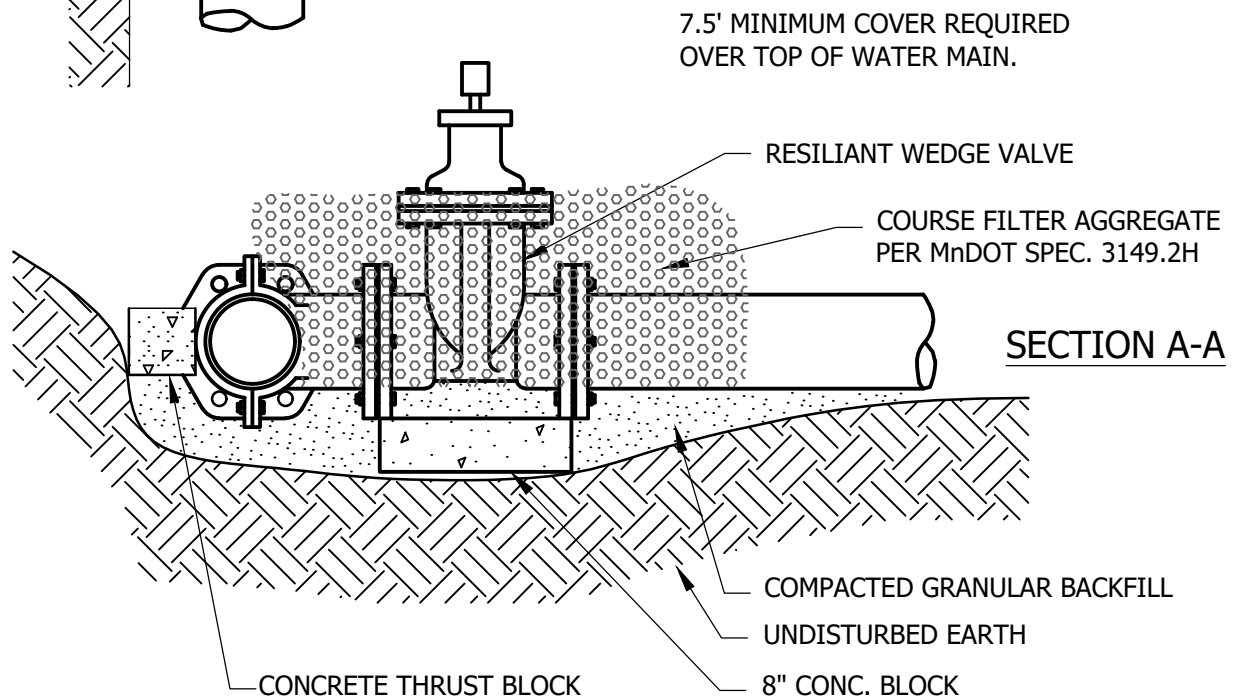
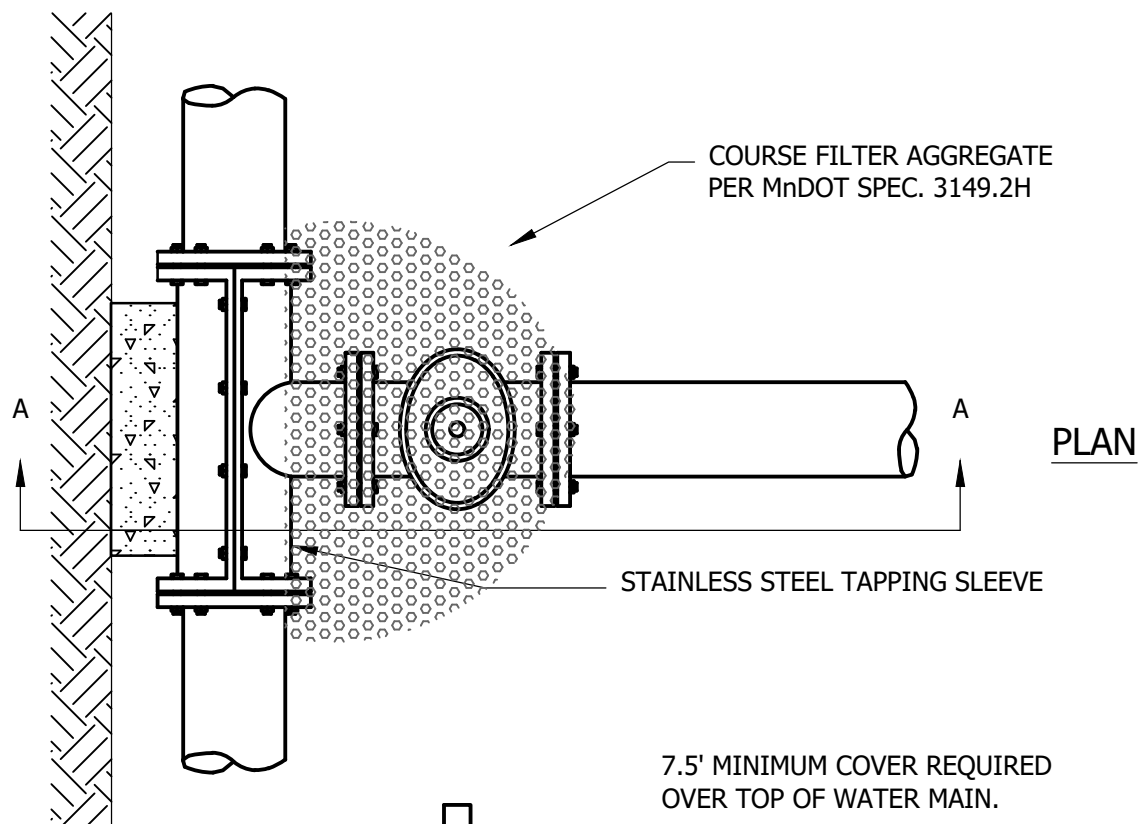
8" CONC. BLOCK



## BUTTERFLY VALVE AND BOX INSTALLATION

LAST REVISION:  
December 2019

PLATE NO.  
WAT-4



## WATER MAIN WET TAP

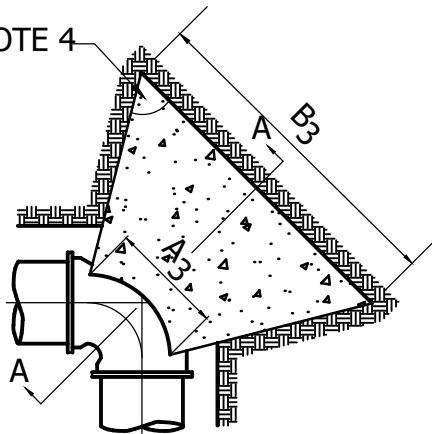
LAST REVISION:  
February 2012

PLATE NO.  
WAT-5

# NOTES:

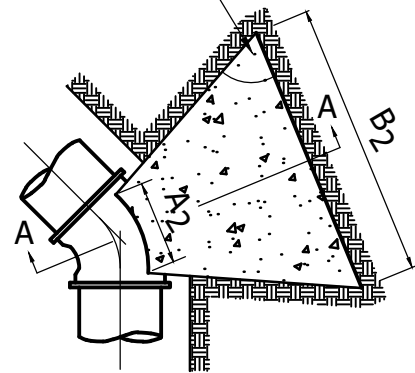
1. SHAPE OF BACK OF BUTTRESS MAY VARY AS LONG AS POURED AGAINST FIRM UNDISTURBED EARTH.
2. DIMENSION C1,C2,C3 SHOULD BE LARGE ENOUGH TO MAKE ANGLE  $\theta$  EQUAL TO OR LARGER THAN  $45^\circ$ .
3. DIMENSION A1,A2,A3 SHOULD BE AS LARGE AS POSSIBLE WITHOUT INTERFERING WITH MJ BOLTS.
4.  $\theta = 45^\circ$  MINIMUM.
5. PLACE POLYETHYLENE BETWEEN CONCRETE & PIPE.

$\theta$  - SEE NOTE 4



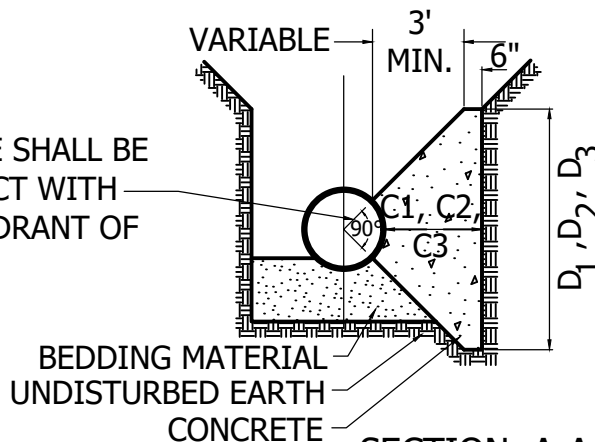
PLAN 90° BENDS

$\theta$  - SEE NOTE 4



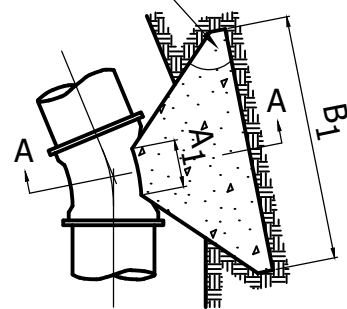
PLAN 45° BENDS

CONCRETE SHALL BE IN CONTACT WITH THIS QUADRANT OF PIPE



SECTION A-A

$\theta$  - SEE NOTE 4



PLAN 22 1/2° BENDS

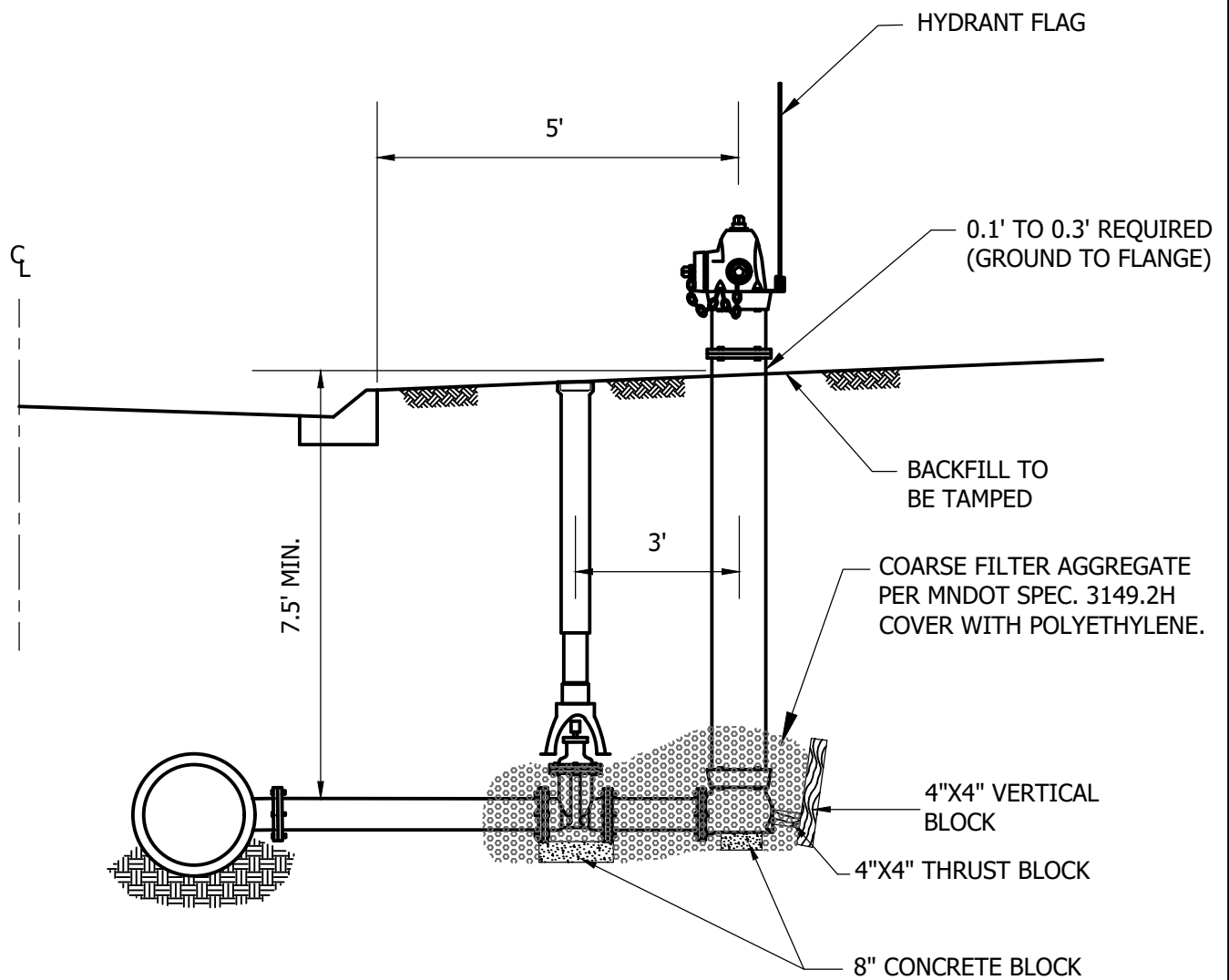


CONCRETE THRUST BLOCKING

LAST REVISION:  
January 2018

PLATE NO.  
WAT-6





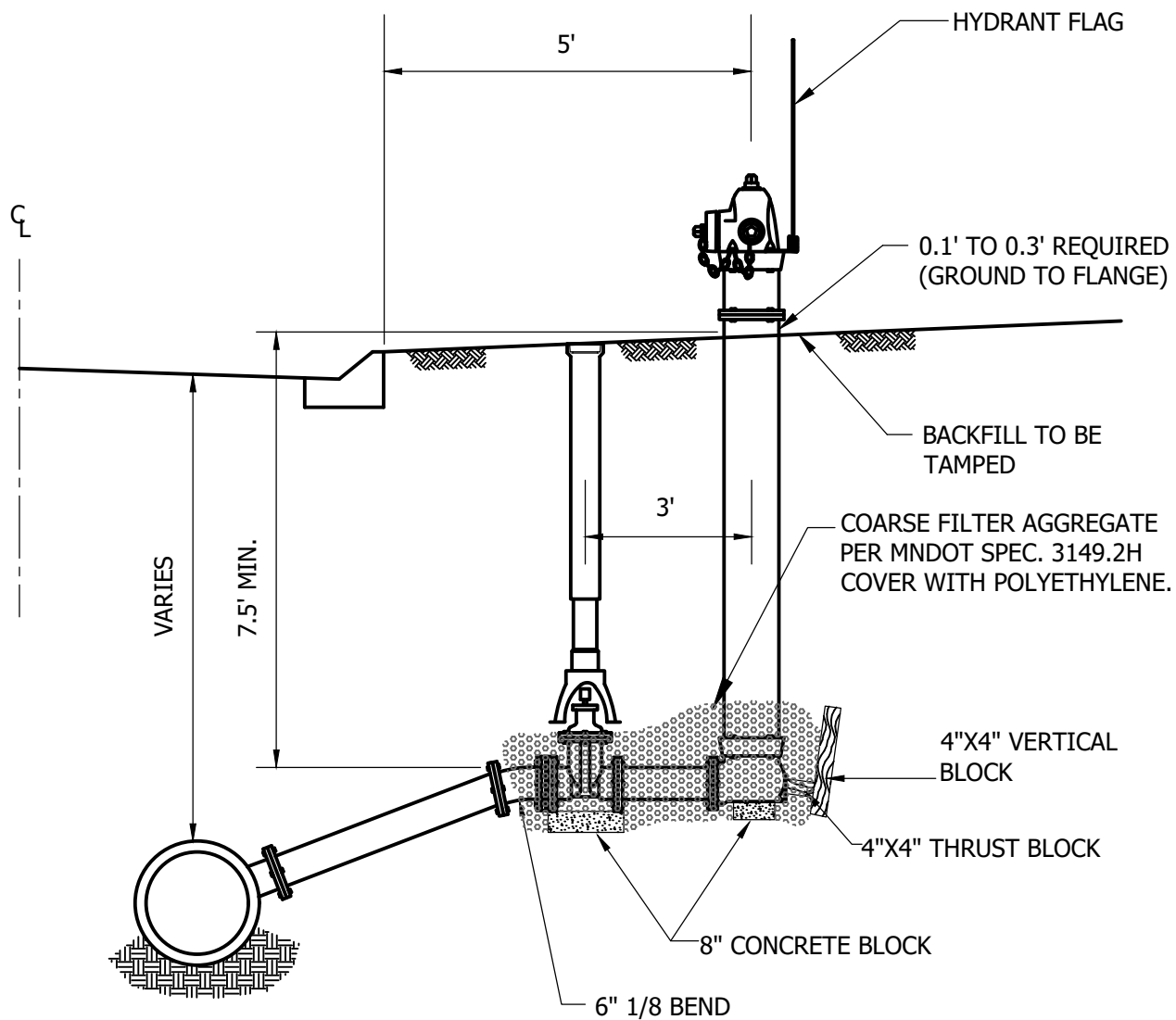
TIE ALL JOINTS WITH  
MEGALUGS (4 REQ.)



## HYDRANT DETAIL W/ MEGALUGS

LAST REVISION:  
February 2012

PLATE NO.  
**WAT-8**



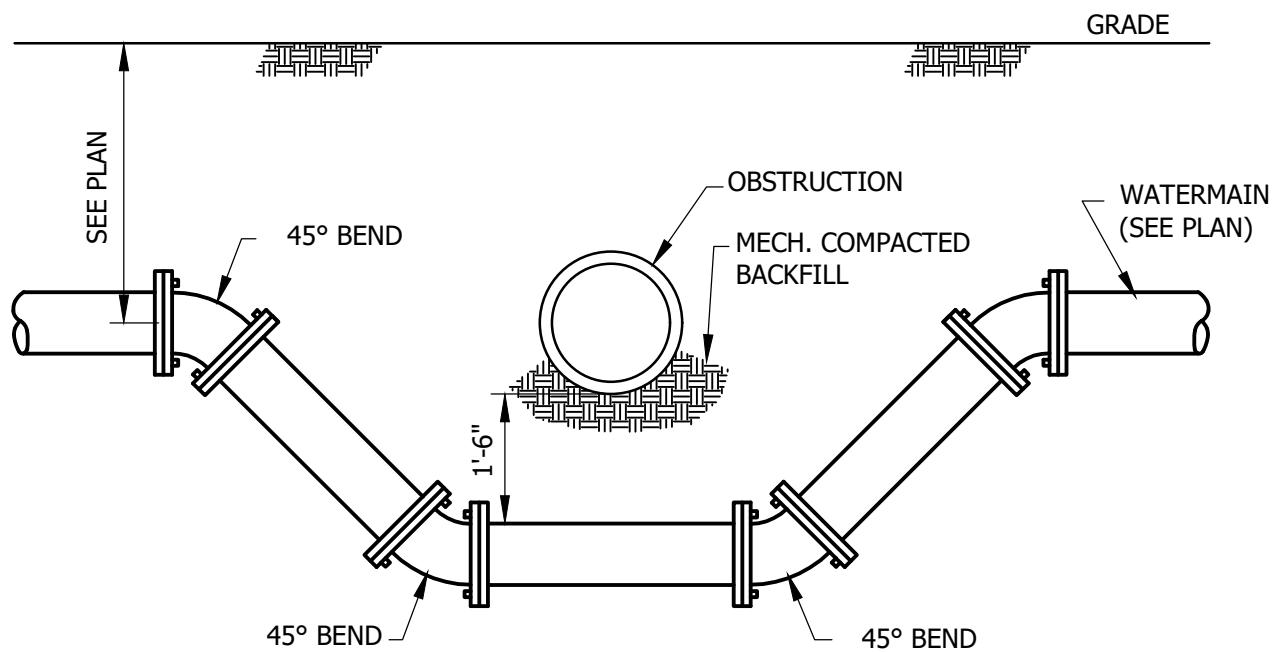
TIE ALL JOINTS WITH  
MEGALUGS (6 REQ.)



## HYDRANT DETAIL WITH VERTICAL BEND & MEGALUGS

LAST REVISION:  
February 2012

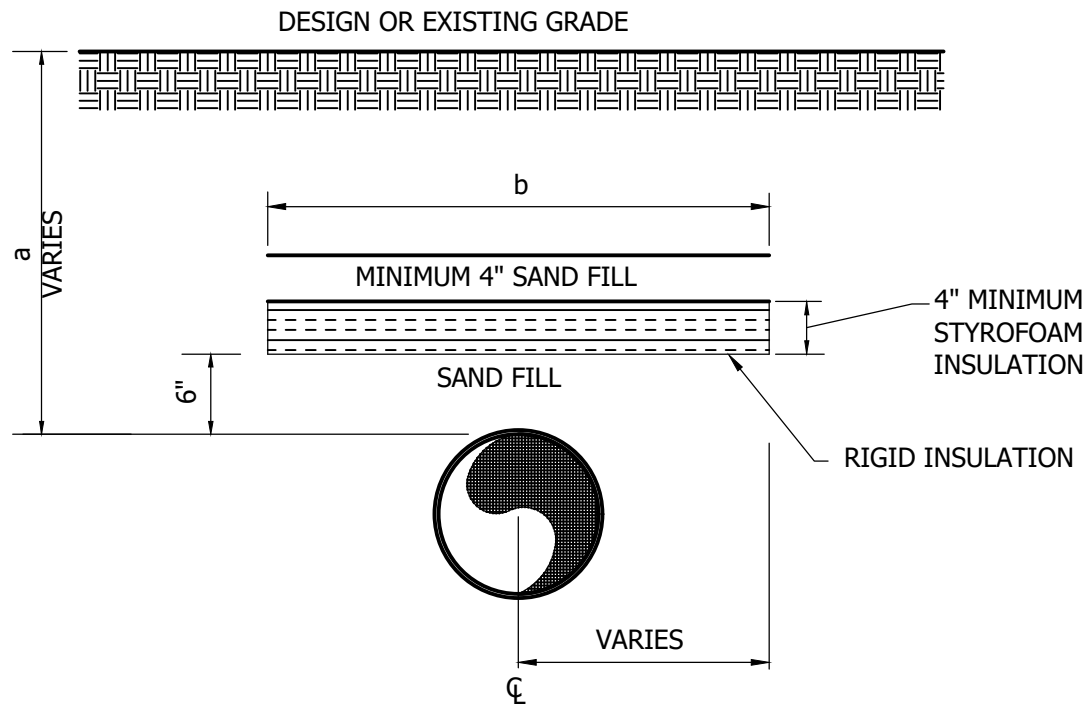
PLATE NO.  
**WAT-9**



## WATER MAIN OFFSET W/ MEGALUGS

LAST REVISION:  
April 2018

PLATE NO.  
**WAT-10**



NOTE: PIPE SHALL BE CENTERED UNDER INSULATION UNLESS OTHERWISE SPECIFIED.

COVER OVER PIPE - a

2'

3'

4'

5'

6'

WIDTH OF INSULATING BOARD - b

11'

9'

7'

5'

3'



INSULATION DETAIL

LAST REVISION:  
January 2018

PLATE NO.  
**WAT-11**

City  
Plate  
No.

# INDEX

## SECTION 3 - STORM SEWER

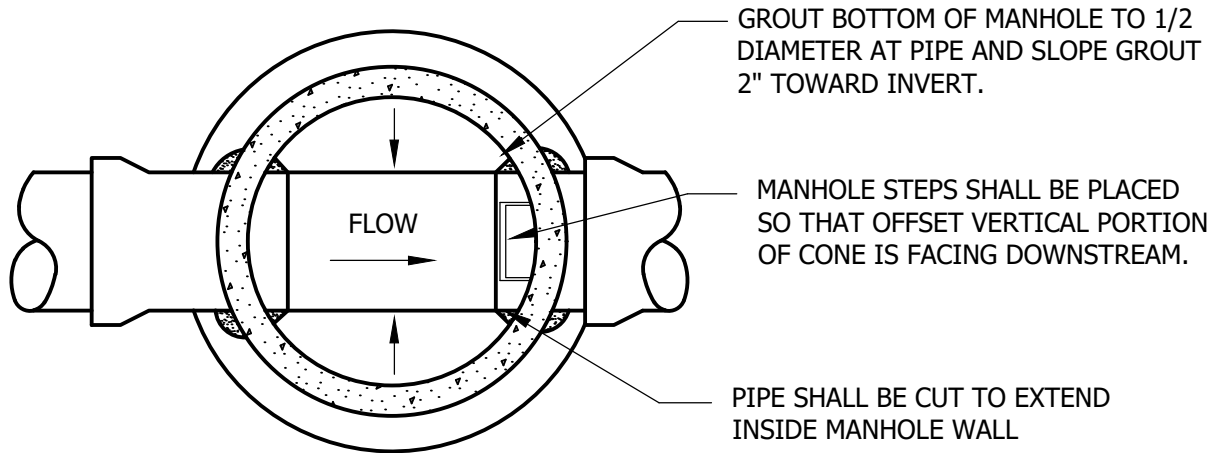
STO-1	STORM SEWER MANHOLE
STO-2	STORM SEWER JUNCTION MANHOLE
STO-3	STORM SEWER JUNCTION MANHOLE WITH REINFORCED TOP SLAB
STO-4	STORM SEWER JUNCTION MANHOLE WITH REINFORCED TOP SLAB AND SUMP
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STO-6	CATCH BASIN MANHOLE WITH SUMP
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STO-8	CATCH BASIN WITH SUMP
STO-9	PRECAST SHALLOW STORM SEWER STRUCTURE
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STO-27	STORM SEWER SERVICE CONNECTION TO RCP
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STO-36	SKIMMER STRUCTURE
STO-37	OVERFLOW STRUCTURE
STO-38	OFF STREET CATCH BASIN WITH CONCRETE STOOL GRATE FRAME
STO-39	OUTLET STRUCTURE WITH POND DRAW DOWN PIPE AND GATE VALVE
STO-40	OVERFLOW STRUCTURE WITH TRASH GUARD
STO-42	TYPICAL POND AND INFILTRATION BASIN LAYOUT



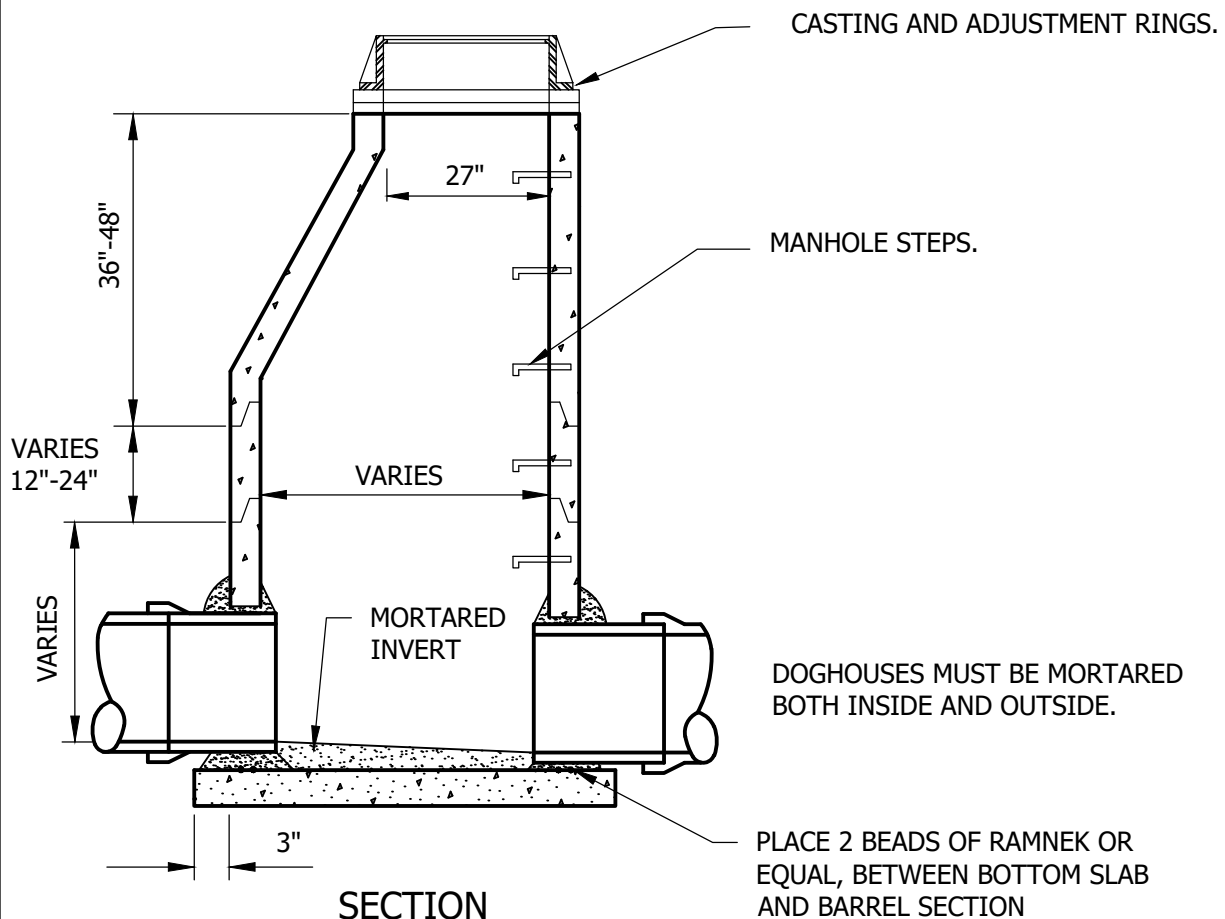
## SECTION 3 - STORM SEWER INDEX

LAST REVISION:  
December 2019

PLATE NO.



PLAN



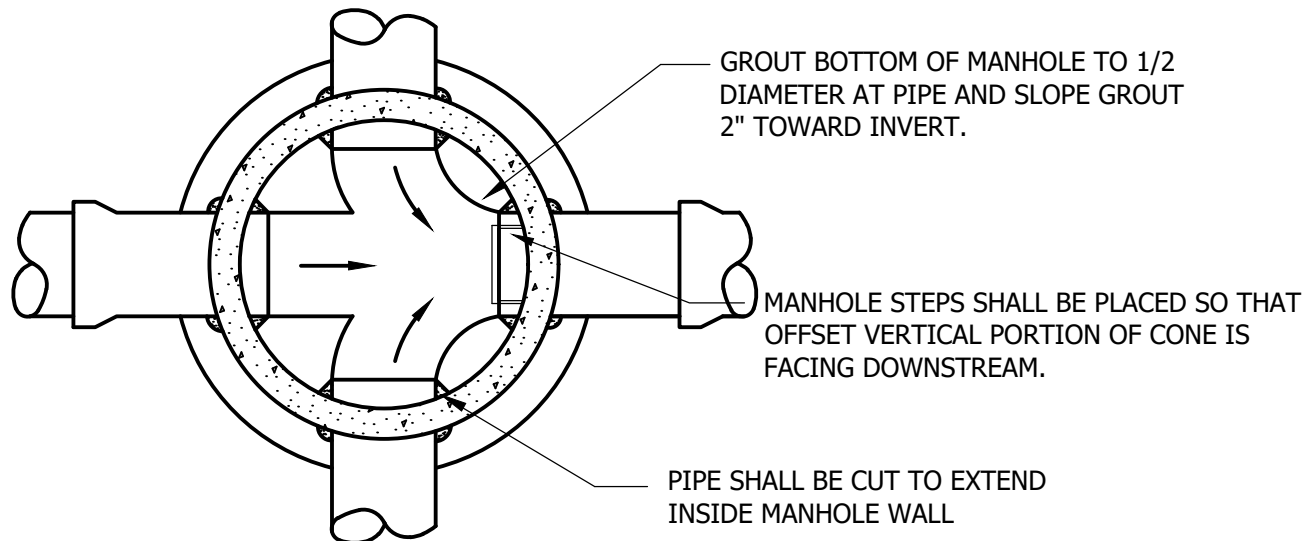
SECTION



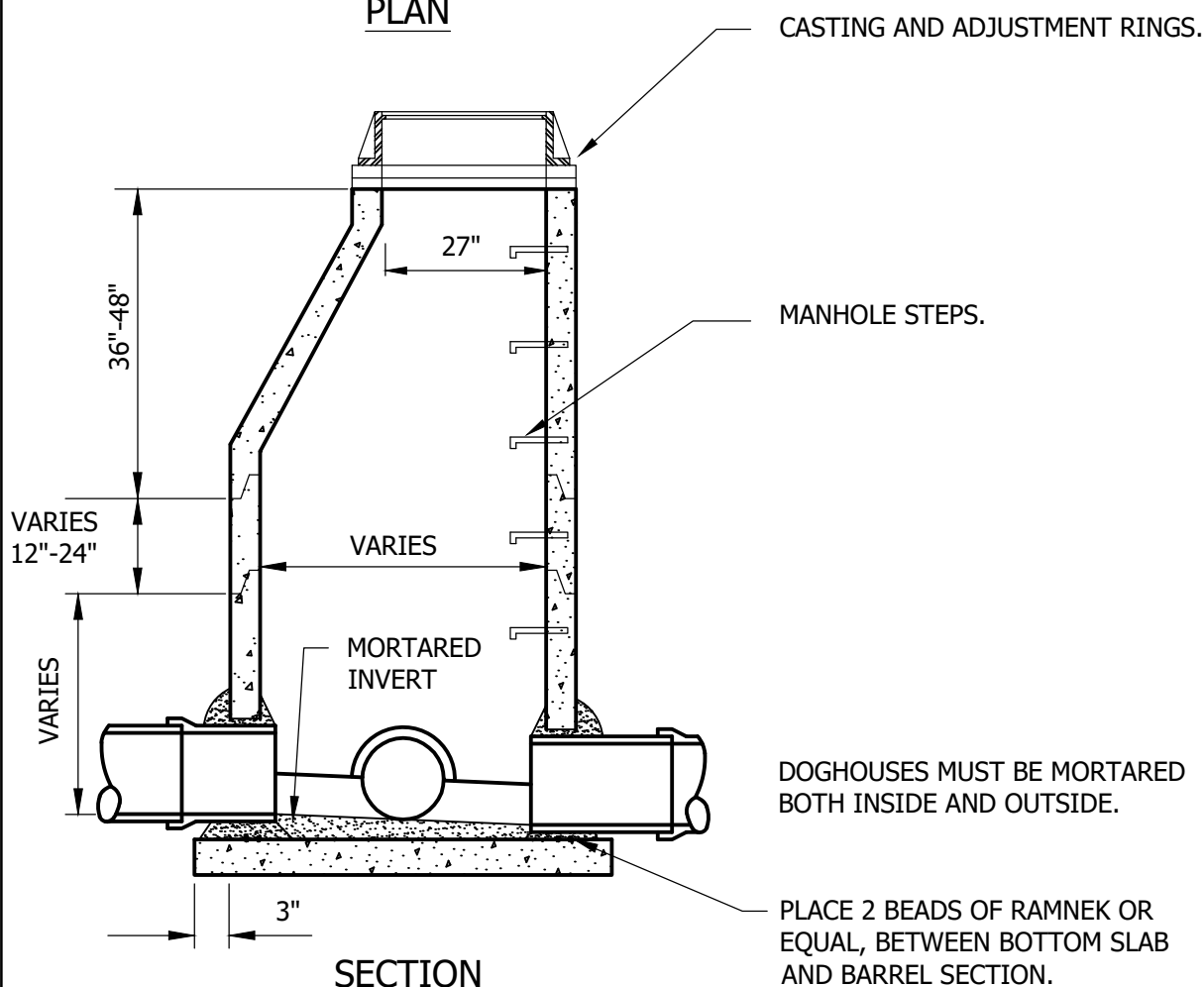
## STORM SEWER MANHOLE

LAST REVISION:  
November 2019

PLATE NO.  
STO-1



PLAN



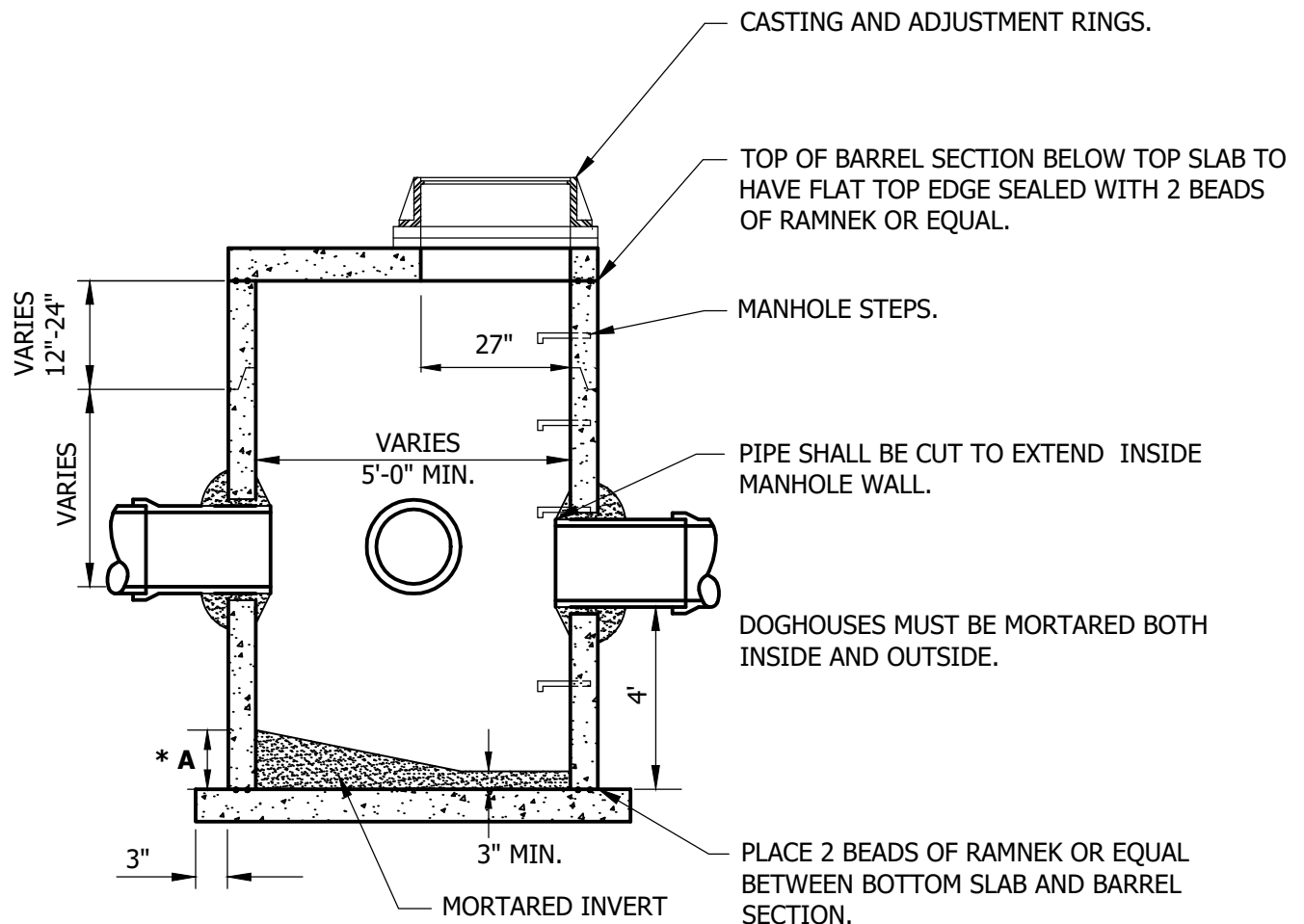
SECTION



## STORM SEWER JUNCTION MANHOLE

LAST REVISION:  
November 2019

PLATE NO.  
STO-2



SECTION

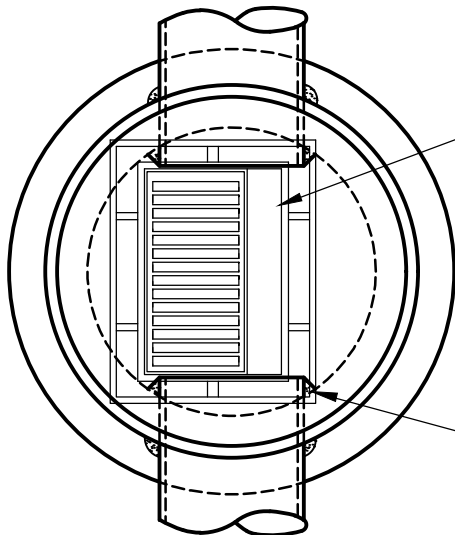


STORM SEWER JUNCTION MANHOLE  
WITH REINFORCED TOP SLAB AND SUMP

LAST REVISION:  
November 2019

PLATE NO.  
STO-4





PLAN

24"X36" SLAB OPENING FOR CASTING.

DIMENSION FROM BACK OF CURB TO  
CENTER OF STRUCTURE.

4' DIA. MH - 9" IN FROM BACK OF CURB

5' DIA. MH - 3" IN FROM BACK OF CURB

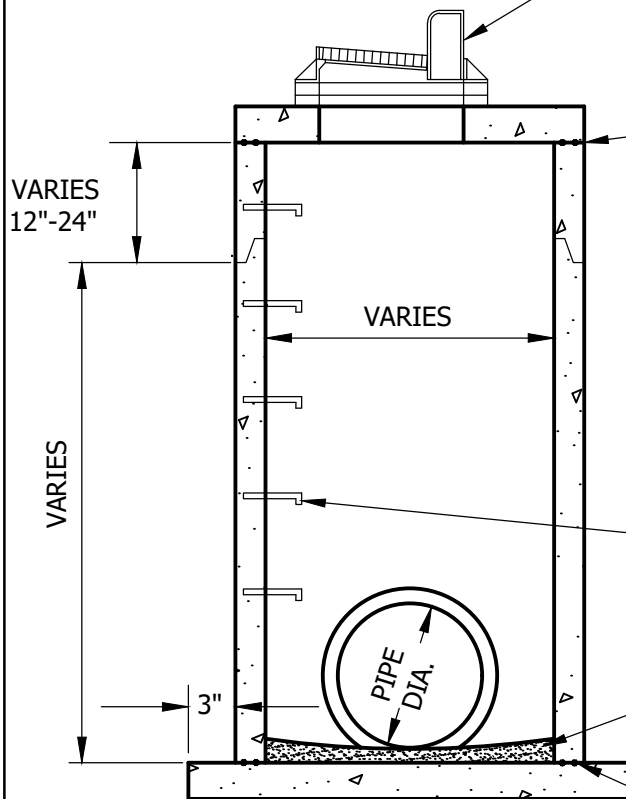
6' DIA. MH - 3" BEHIND BACK OF CURB

7' DIA. MH - 9" BEHIND BACK OF CURB

8' DIA. MH - 15" BEHIND BACK OF CURB

PIPE SHALL BE CUT TO EXTEND  
INSIDE MANHOLE WALL.

CASTING AND ADJUSTMENT RINGS.



SECTION

TOP OF BARREL SECTION UNDER TOP  
SLAB TO HAVE FLAT TOP EDGE SEALED  
WITH 2 BEADS OF RAMNEK OR EQUAL.

DOGHOUSES SHALL BE MORTARED ON  
BOTH THE OUTSIDE AND INSIDE.

MANHOLE STEPS.

MORTARED INVERT.

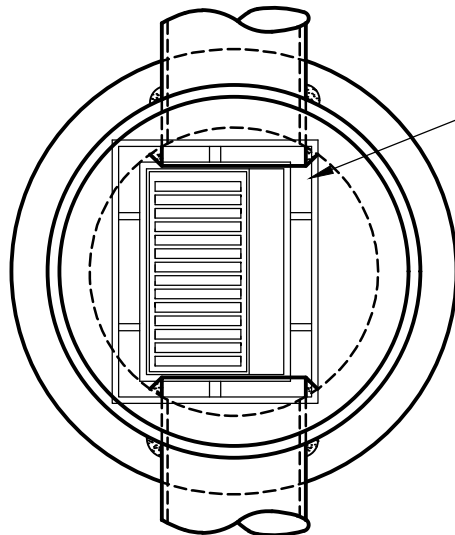
PLACE 2 BEADS OF RAMNEK OR  
EQUAL, BETWEEN BOTTOM SLAB  
AND BARREL SECTION.



## CATCH BASIN MANHOLE

LAST REVISION:  
November 2019

PLATE NO.  
STO-5



24"X36" SLAB OPENING FOR CASTING.

DIMENSION FROM BACK OF CURB TO CENTER OF STRUCTURE.

4' DIA. MH - 9" IN FROM BACK OF CURB

5' DIA. MH - 3" IN FROM BACK OF CURB

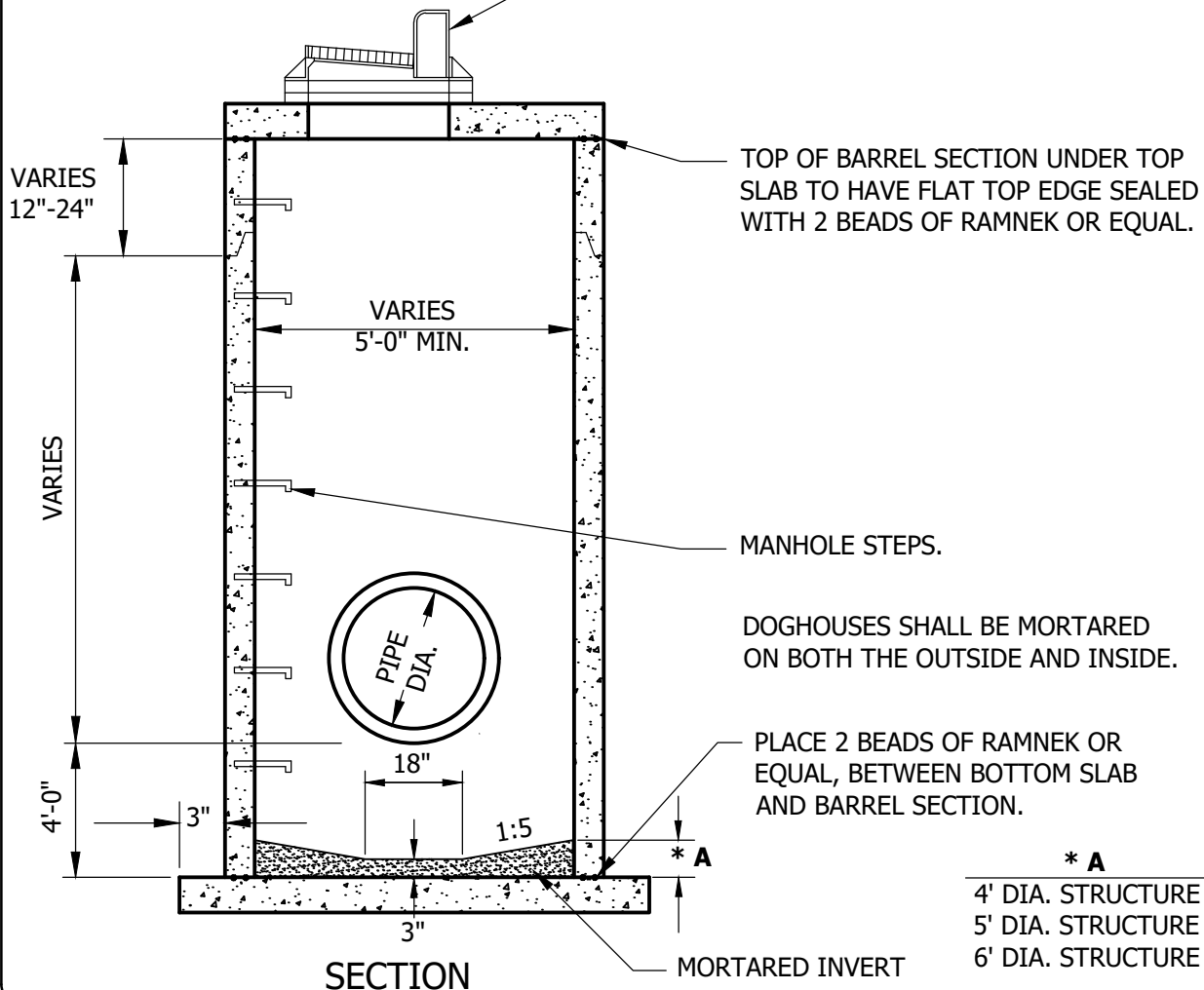
6' DIA. MH - 3" BEHIND BACK OF CURB

7' DIA. MH - 9" BEHIND BACK OF CURB

8' DIA. MH - 15" BEHIND BACK OF CURB

CASTING AND ADJUSTMENT RINGS.

PLAN



TOP OF BARREL SECTION UNDER TOP SLAB TO HAVE FLAT TOP EDGE SEALED WITH 2 BEADS OF RAMNEK OR EQUAL.

MANHOLE STEPS.

DOGHOUSES SHALL BE MORTARED ON BOTH THE OUTSIDE AND INSIDE.

PLACE 2 BEADS OF RAMNEK OR EQUAL, BETWEEN BOTTOM SLAB AND BARREL SECTION.

\* A

4' DIA. STRUCTURE	6"
5' DIA. STRUCTURE	8"
6' DIA. STRUCTURE	9"

MORTARED INVERT

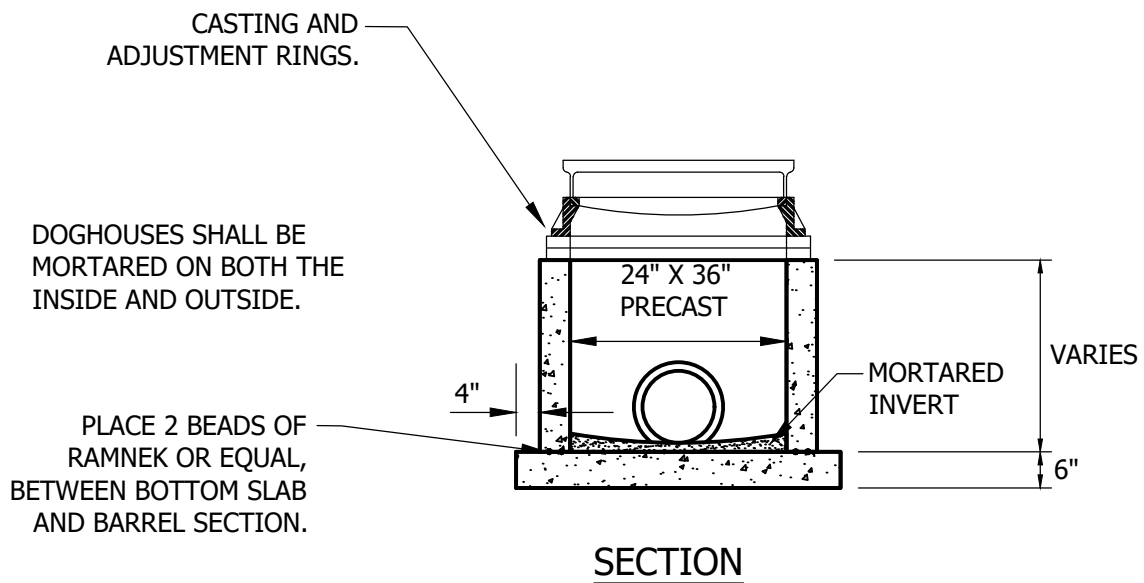
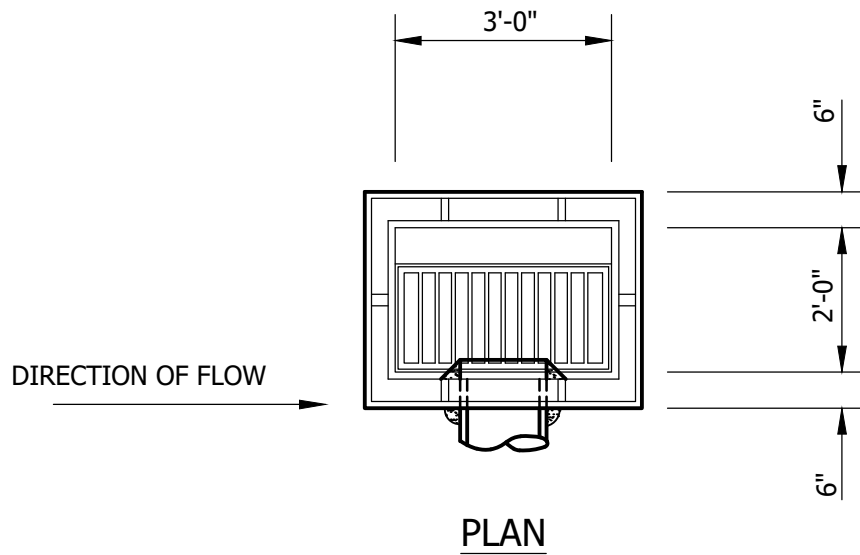
SECTION



## CATCH BASIN MANHOLE WITH SUMP

LAST REVISION:  
November 2019

PLATE NO.  
STO-6

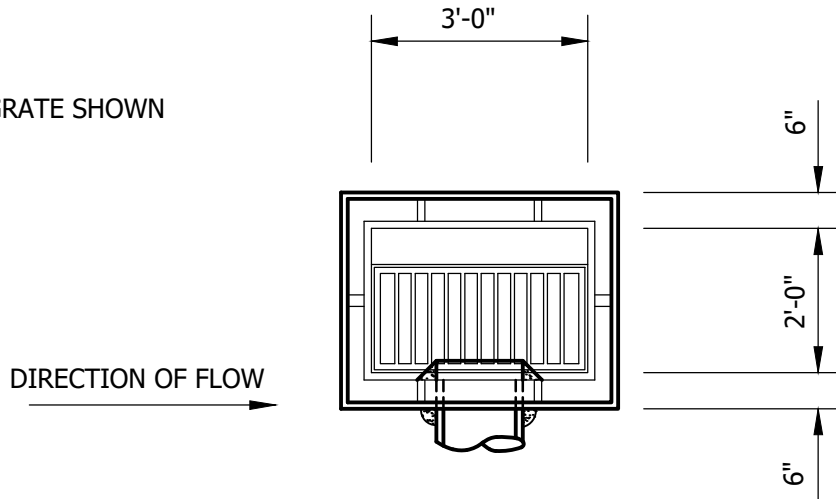


## CATCH BASIN

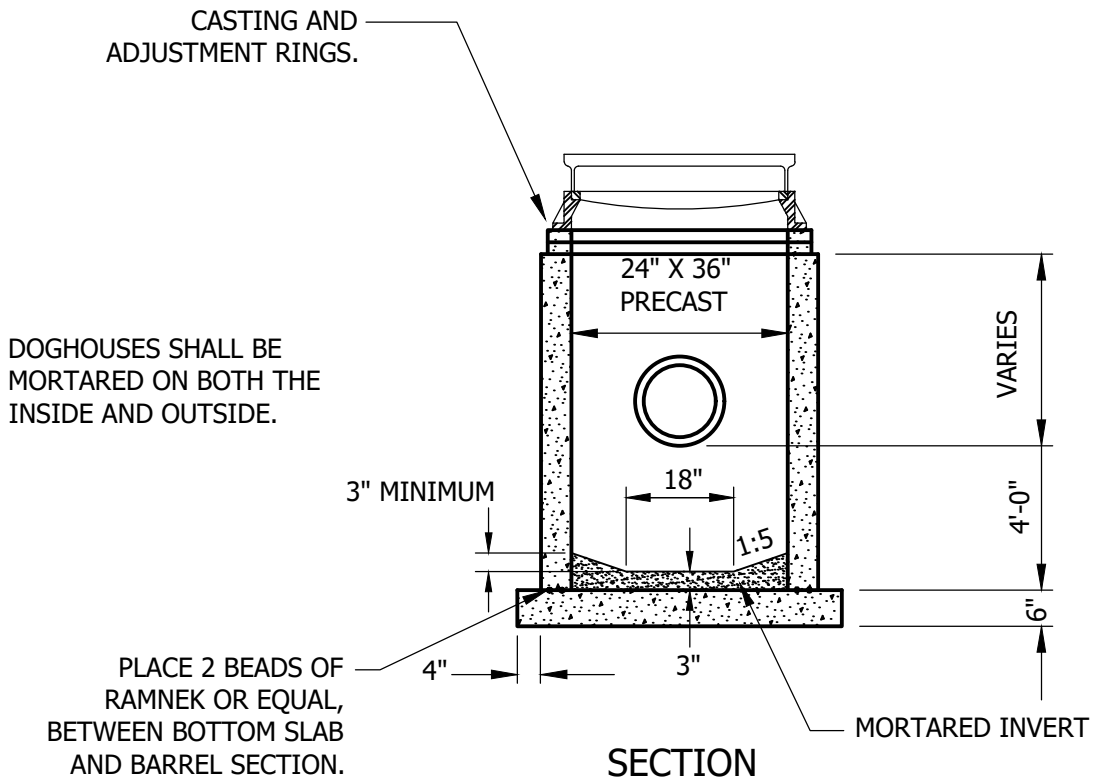
LAST REVISION:  
November 2019

PLATE NO.  
STO-7

NOTE:  
VANE GRATE SHOWN



PLAN



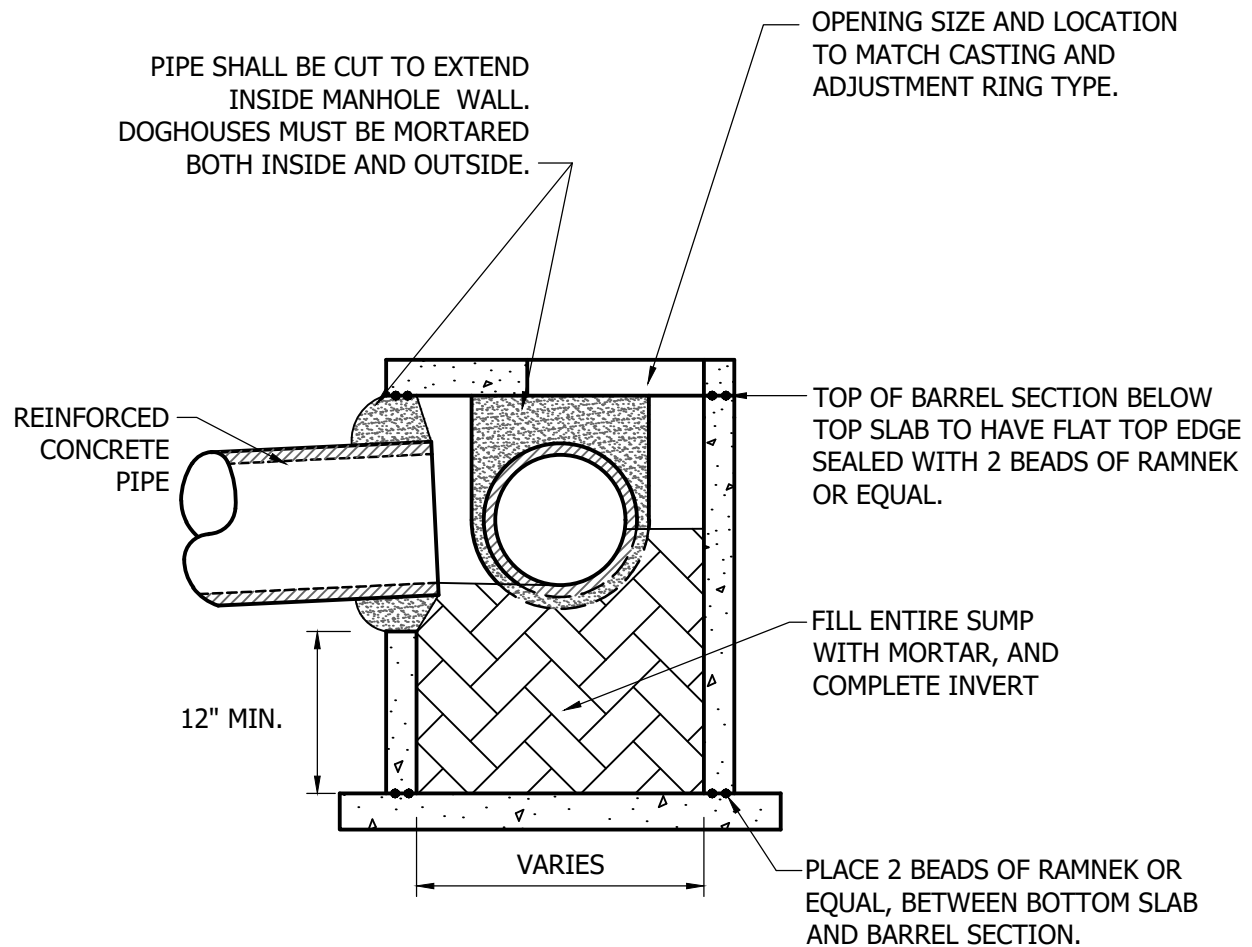
SECTION



## CATCH BASIN WITH SUMP

LAST REVISION:  
November 2019

PLATE NO.  
STO-8



REFER TO SCHEDULE FOR  
DIAMETER OF STRUCTURE



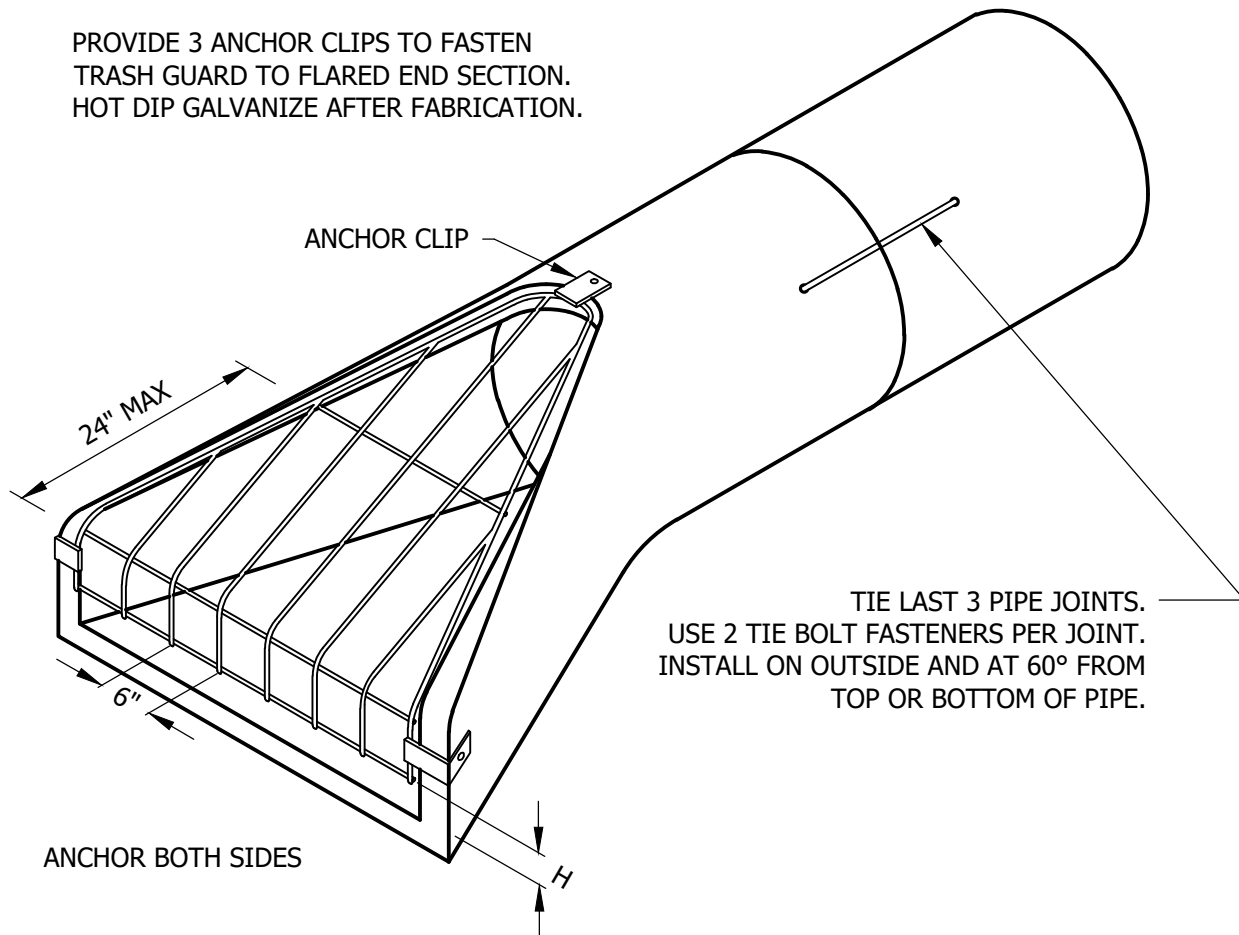
## PRECAST SHALLOW STORM SEWER STRUCTURE

LAST REVISION:  
December 2019

PLATE NO.  
STO-9

INSTALL TRASH GUARDS ON ALL OUTLET  
(DOWNSTREAM) FLARED END SECTIONS  
AND INLET (UPSTREAM) FLARED END  
SECTIONS LARGER THAN 24".

PROVIDE 3 ANCHOR CLIPS TO FASTEN  
TRASH GUARD TO FLARED END SECTION.  
HOT DIP GALVANIZE AFTER FABRICATION.



### ISOMETRIC

SEE CITY PLATE NO. STO-13 AND  
STO-14 FOR RIPRAP PLACEMENT.

### TRASH GUARD SIZING

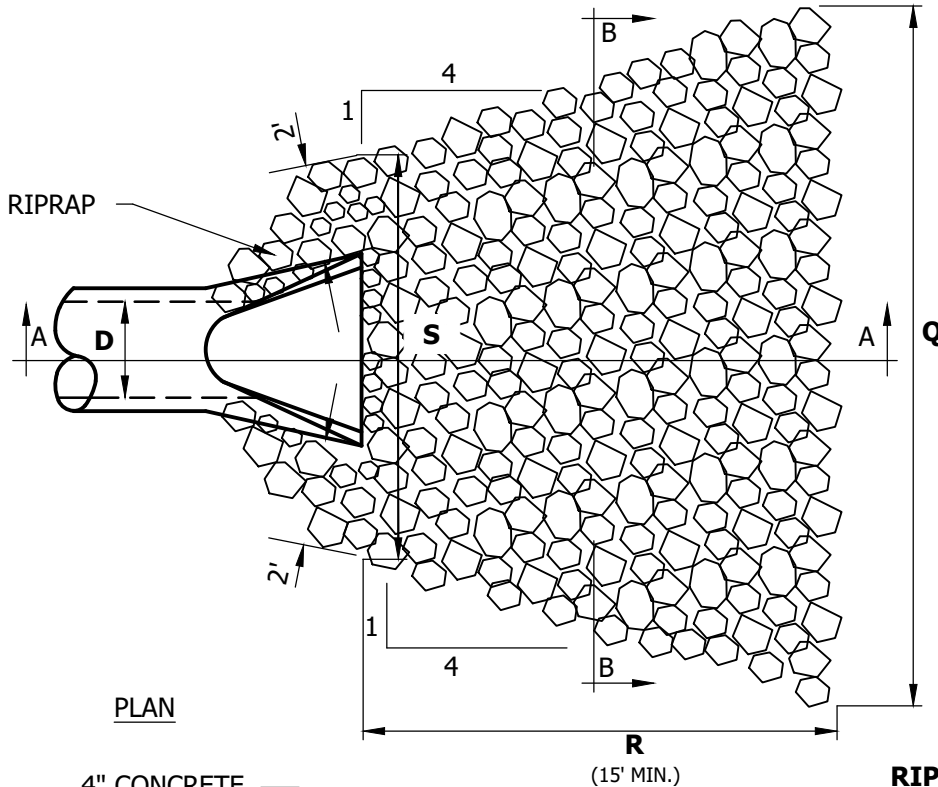
PIPE SIZE	ROUND BARS	'H'	BOLTS
12"- 18"	3/4"φ	3"-4"	5/8"
21"- 42"	1"φ	4"-6"	3/4"
48"-72"	1 1/4"φ	6"-8"	1"



## FLARED END SECTION WITH TRASH GUARD

LAST REVISION:  
December 2019

PLATE NO.  
**STO-12**



#### RIPRAP AREA SIZES

D	Q	R	S
12"	11'	15'	7'
24"	15'	15'	9'
36"	19'	15'	11'
48"	20'	16'	12'
54"	25'	22'	13'

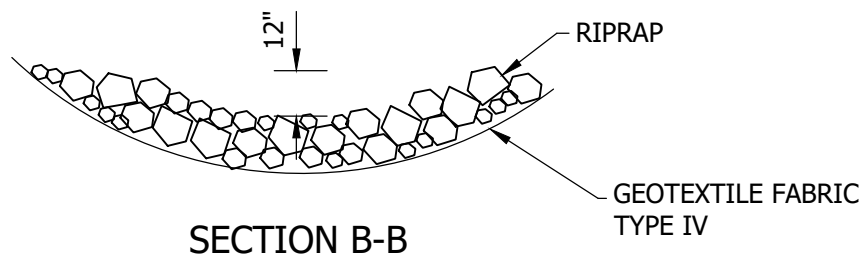
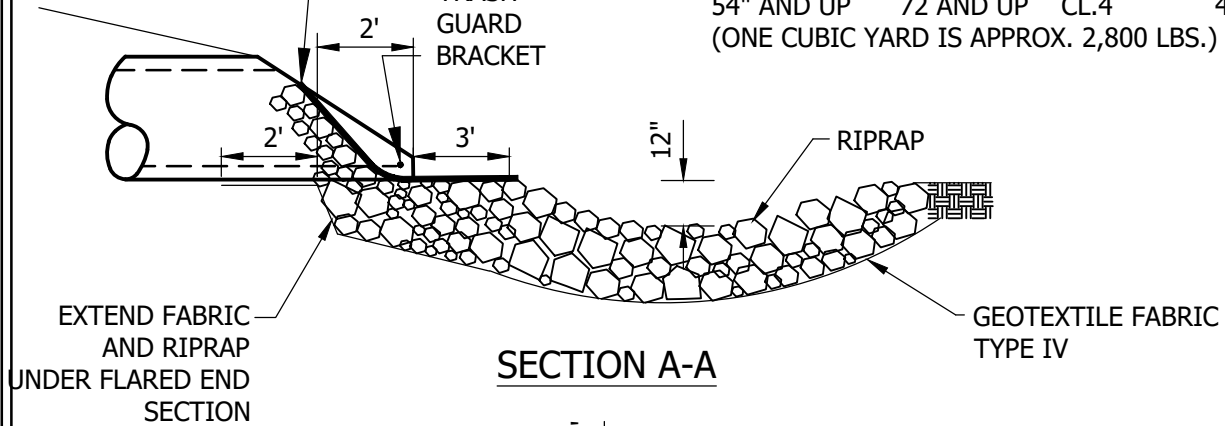
4" CONCRETE  
COVERING  
RIP RAP  
(BROOM FINISH)

MAINTAIN  
ACCESS TO  
TRASH  
GUARD  
BRACKET

#### RIPRAP REQUIREMENTS

D	CY	CLASS	DEPTH
12" TO 24"	15 TO 20	CL.3	3'
27" TO 33"	20 TO 25	CL.3	3'
36" TO 48"	25 TO 38	CL.3	3'
54" AND UP	72 AND UP	CL.4	4'

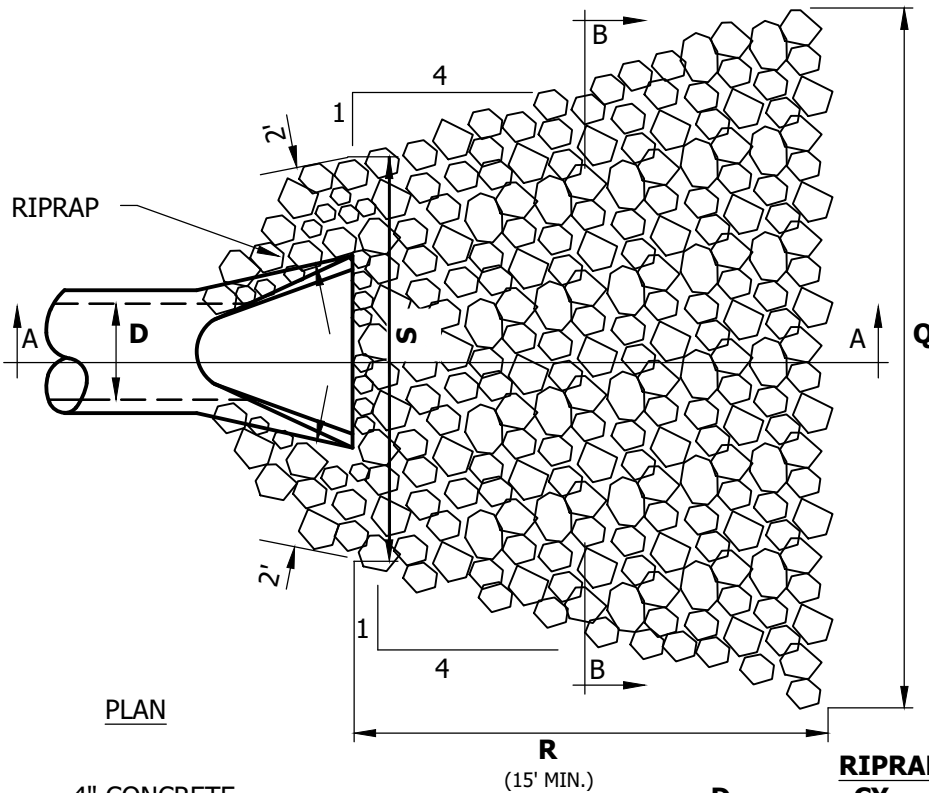
(ONE CUBIC YARD IS APPROX. 2,800 LBS.)



## RIPRAP AT FLARED END SECTION

LAST REVISION:  
November 2017

PLATE NO.  
STO-13



#### RIPRAP AREA SIZES

D	Q	R	S
12"	11'	15'	7'
24"	15'	15'	9'
36"	19'	15'	11'
48"	22'	20'	12'
54"	25'	22'	13'

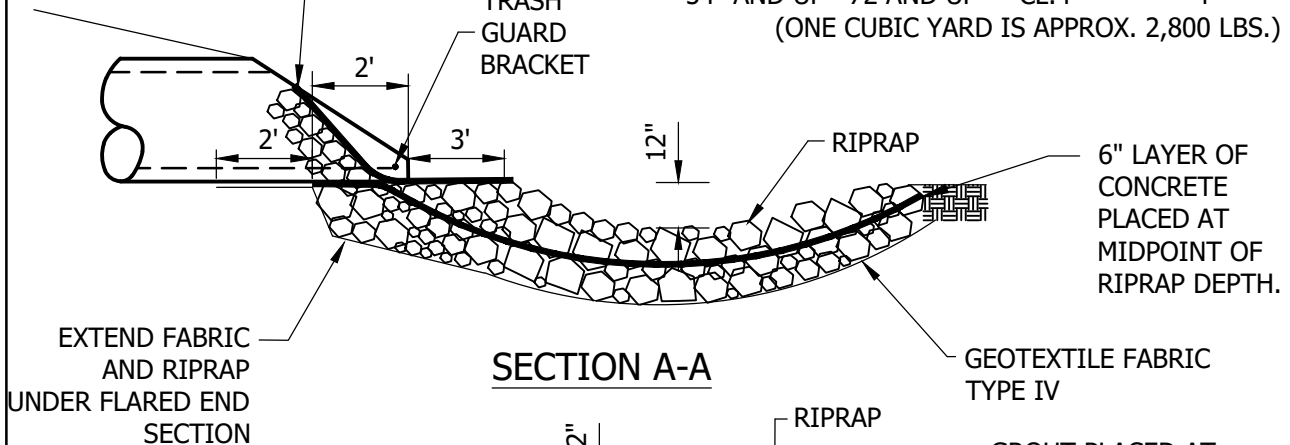
#### RIPRAP REQUIREMENTS

D	CY	CLASS	DEPTH
12" TO 24"	15 TO 20	CL.3	3'
27" TO 33"	20 TO 25	CL.3	3'
36" TO 48"	25 TO 38	CL.3	3'
54" AND UP	72 AND UP	CL.4	4'

(ONE CUBIC YARD IS APPROX. 2,800 LBS.)

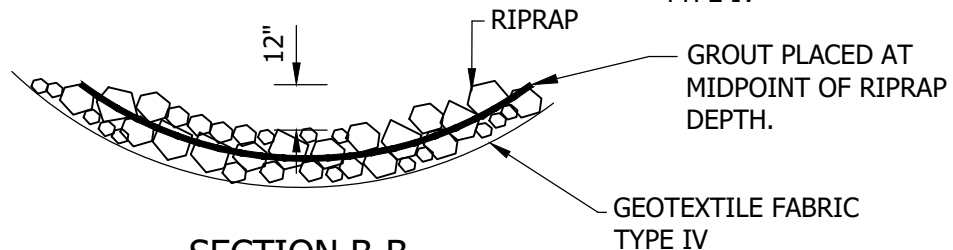
4" CONCRETE  
COVERING RIP RAP  
(BROOM FINISH)

MAINTAIN  
ACCESS TO  
TRASH  
GUARD  
BRACKET



EXTEND FABRIC  
AND RIPRAP  
UNDER FLARED END  
SECTION

#### SECTION A-A



#### SECTION B-B

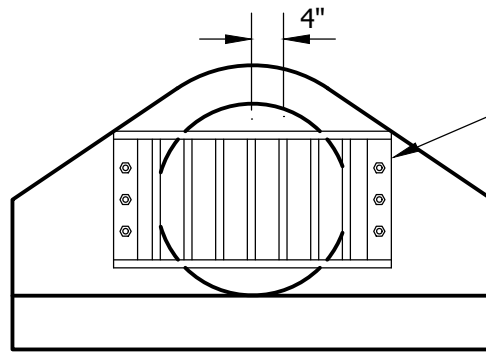


## GROUTED RIPRAP AT FLARED END SECTION

LAST REVISION:  
November 2017

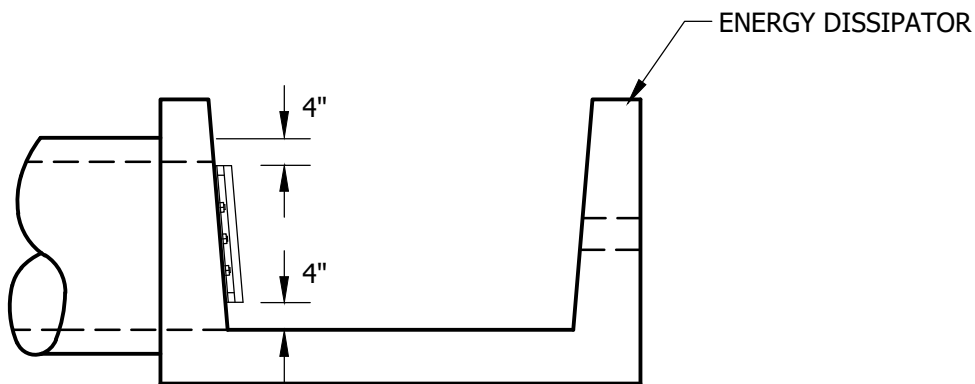
PLATE NO.  
STO-14





STEEL PLATE - BOLT TO CONCRETE WITH STAINLESS STEEL BOLTS. HOT DIP GALVANIZE AFTER FABRICATION.

FRONT VIEW



ENERGY DISSIPATOR

SIDE VIEW

SIZE OF PIPE	SIZE OF PLATE	BARS	BOLTS
12" TO 18"	1/4"X2"	3/4"φ	2-5/8"φ
21" TO 48"	1/4"X3"	1"φ	3-3/4"φ

NOTE:

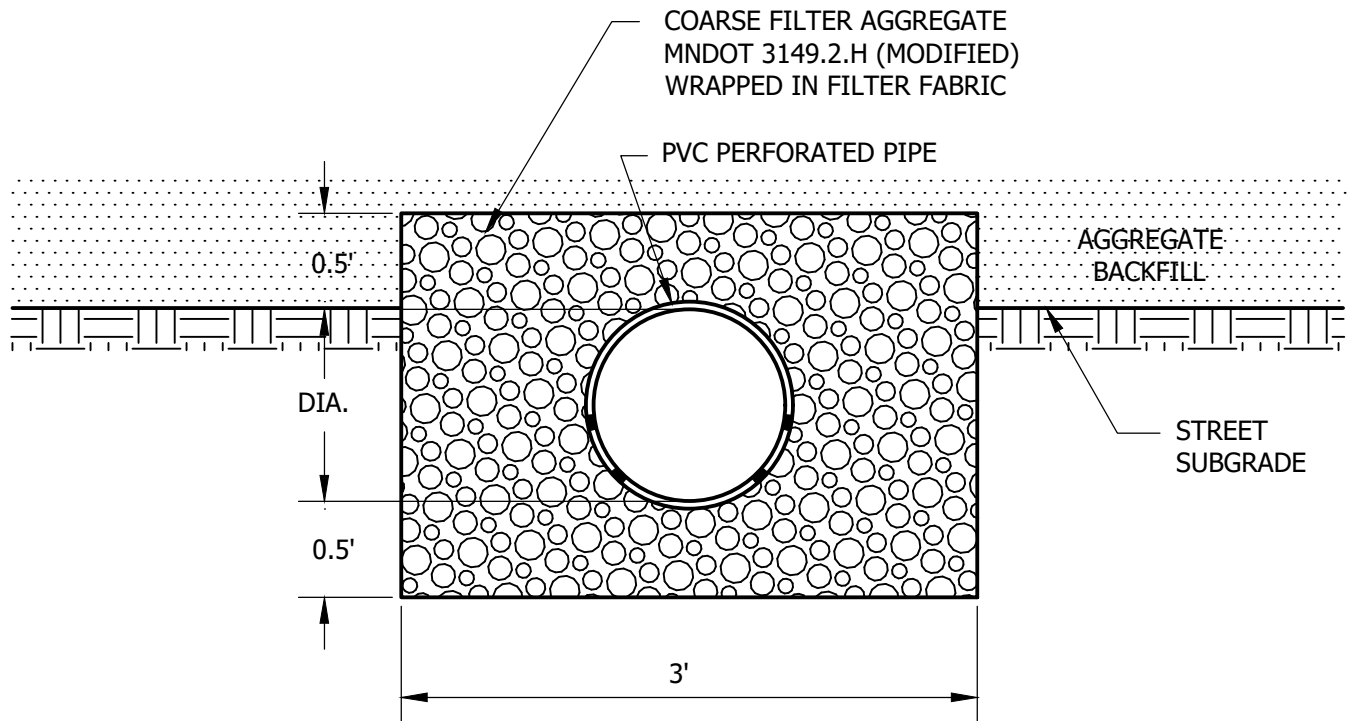
TIE LAST 3 JOINTS. USE 2 TIE BOLT FASTENERS PER JOINT. INSTALL ON OUTSIDE OF PIPE AND AT 60° FROM TOP OR BOTTOM OF PIPE.



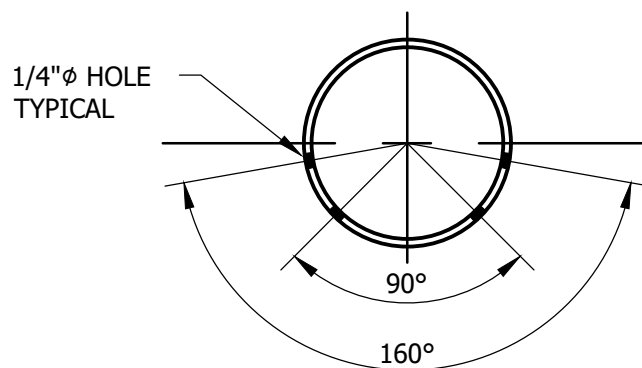
ENERGY DISSIPATOR  
AND TRASH GUARD

LAST REVISION:  
November 2017

PLATE NO.  
**STO-18**



TRENCH DETAIL



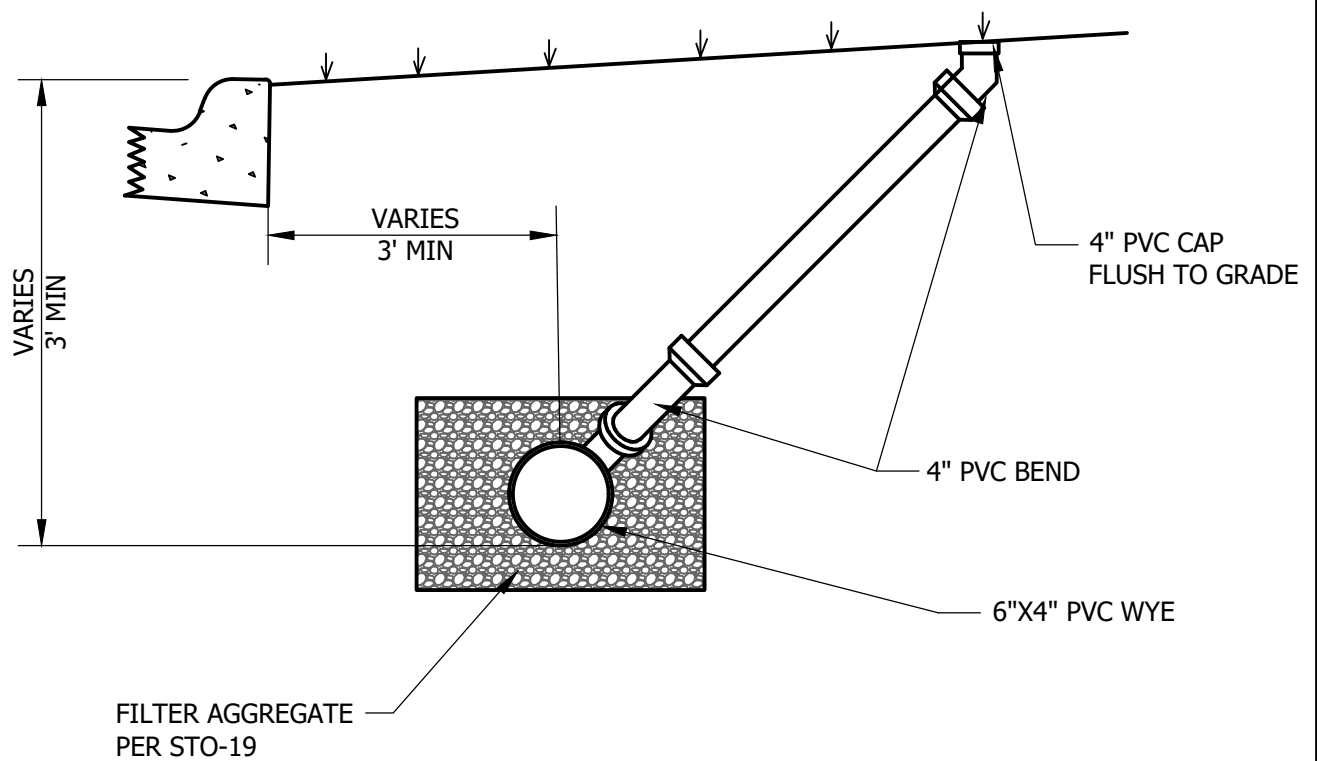
PIPE DETAIL



PERFORATED PVC DRAIN TILE PIPE

LAST REVISION:  
January 2018

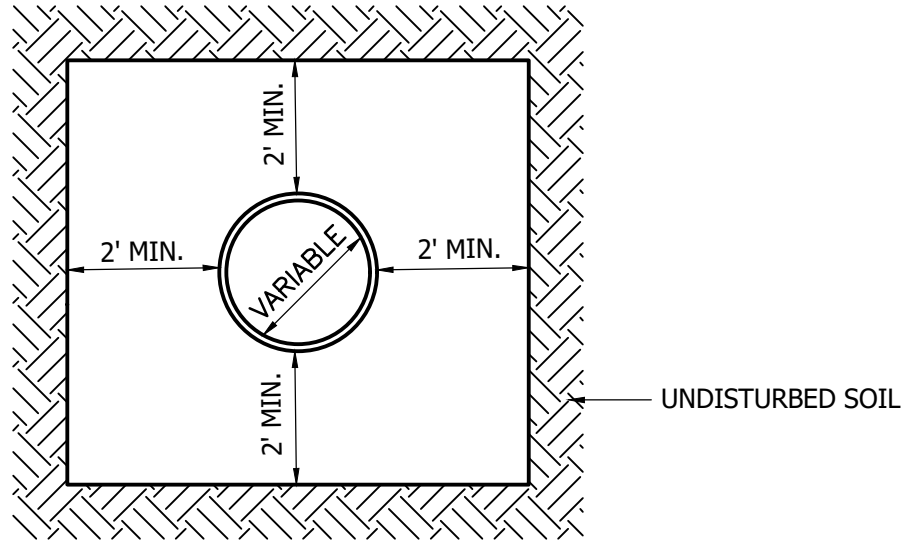
PLATE NO.  
STO-19



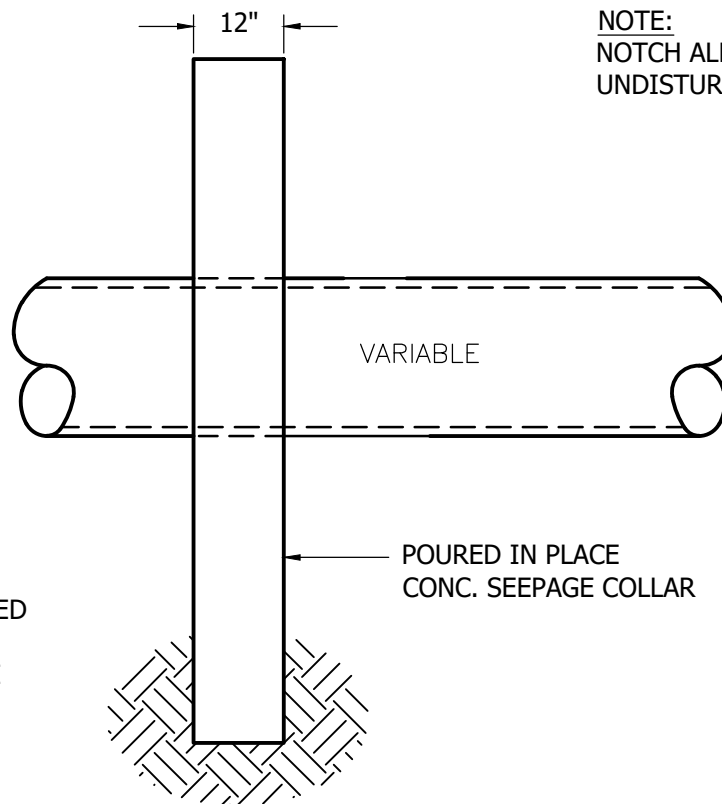
## RESIDENTIAL STORM DRAIN SERVICE

LAST REVISION:  
December 2016

PLATE NO.  
**STO-20**



SECTION A-A



NOTE:  
NOTCH ALL SIDES INTO  
UNDISTURBED SOIL

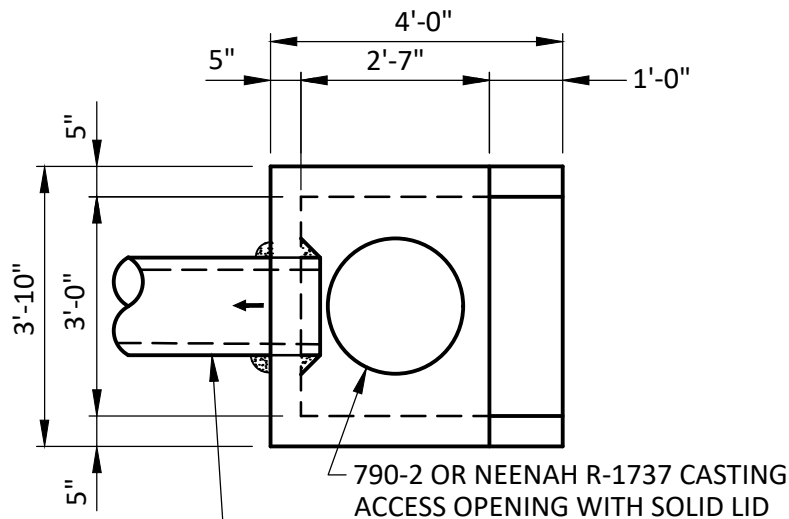
NOTE:  
COLLAR MUST BE  
ADEQUATELY FRAMED  
USING WOOD OR  
OTHER ACCEPLABLE  
MATERIAL



SEEPAGE COLLAR

LAST REVISION:  
March 2008

PLATE NO.  
STO-24



OUTLET PIPE  
MAX. 18" DIA.

TOP VIEW

790-2 OR NEENAH R-1737 CASTING  
ACCESS OPENING WITH SOLID LID

TOP STRUCTURE

OUTLET  
PIPE

NWL =  
PIPE INVERT

STRUCTURE INVERT

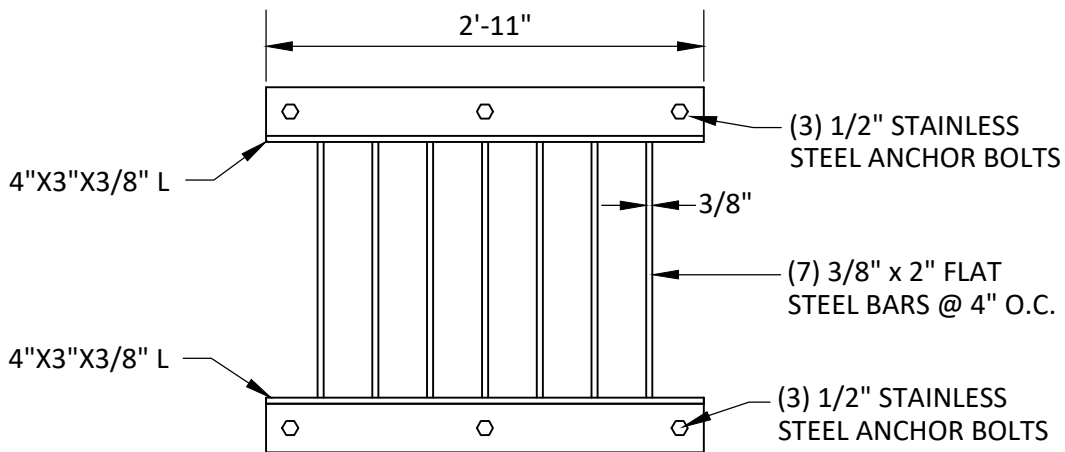
PIPE  
THICKNESS

GRATE  
SEE DETAIL

SIDE VIEW

OUTLET STRUCTURE NOTES:

1. OUTLET STRUCTURE SHALL BE REINFORCED PRECAST CONCRETE.
2. GRATING SHALL BE HOT DIPPED GALVANIZED AFTER FABRICATION.
3. ALL ANCHOR BOLTS SHALL BE 1/2"  $\phi$  S.S.



GRATE DETAIL

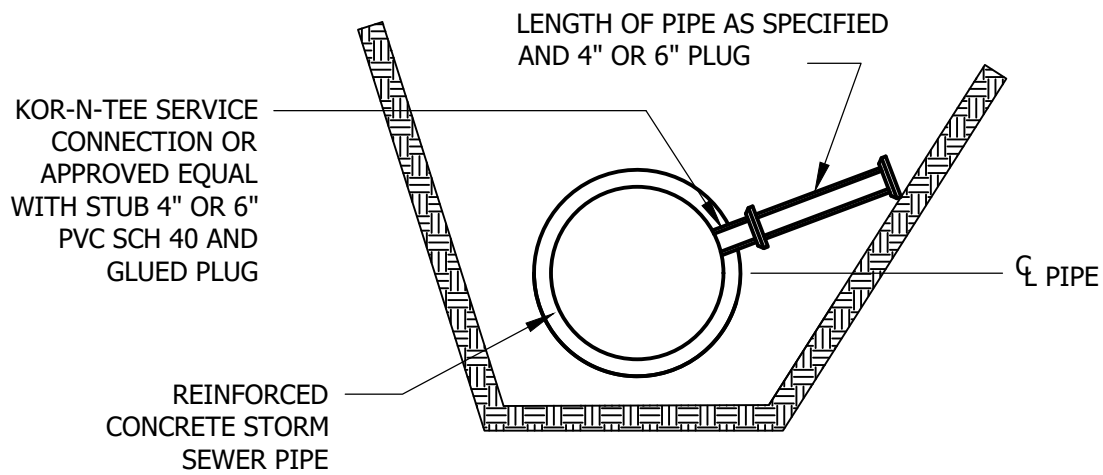


OUTLET STRUCTURE

LAST REVISION:  
November 2019

PLATE NO.  
STO-25

NOTE:  
SERVICE CONNECTIONS  
TO BE AT 2:00 OR 10:00

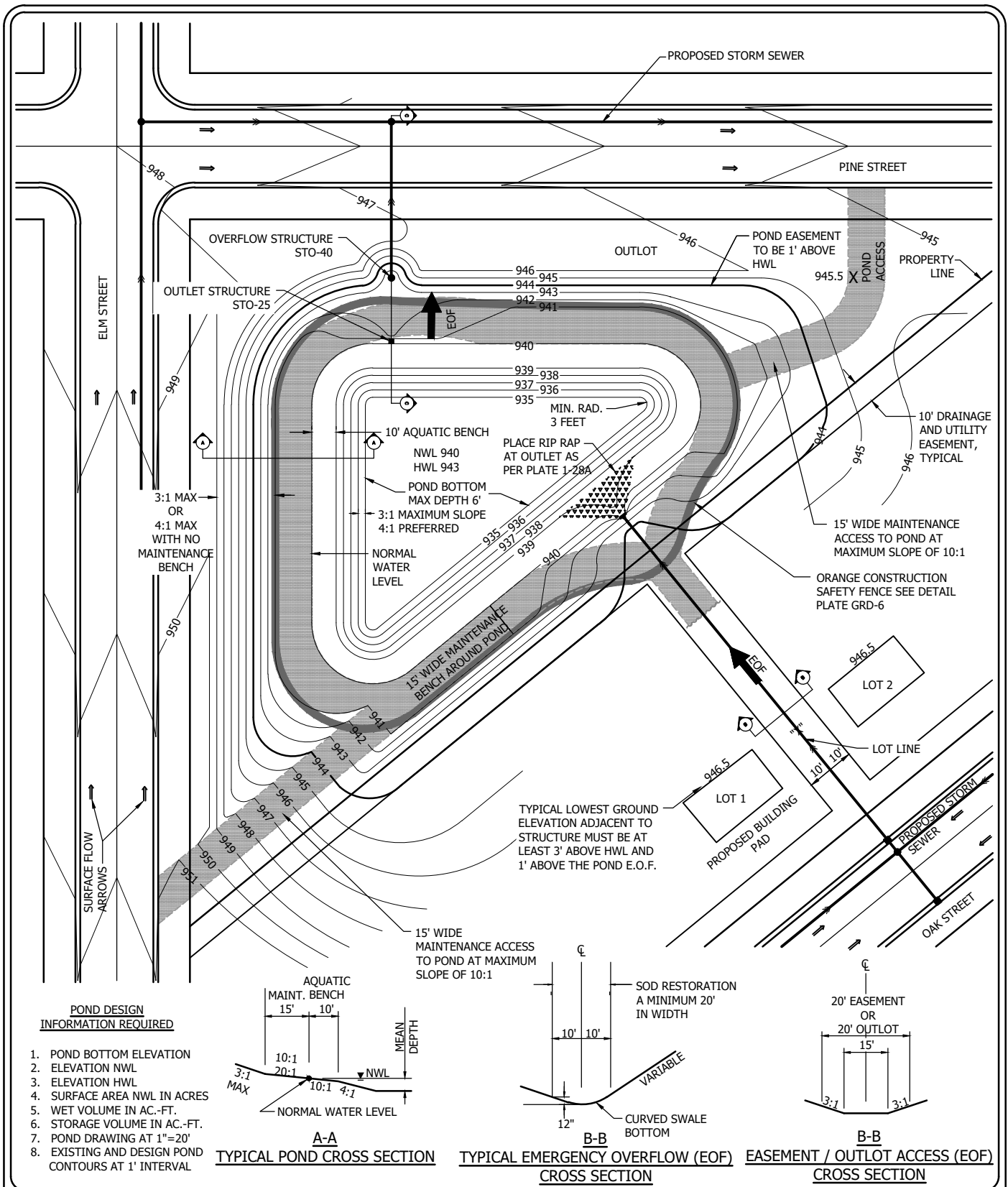


## STORM SEWER SERVICE CONNECTION TO RCP

LAST REVISION:  
April 2004

PLATE NO.  
**STO-27**



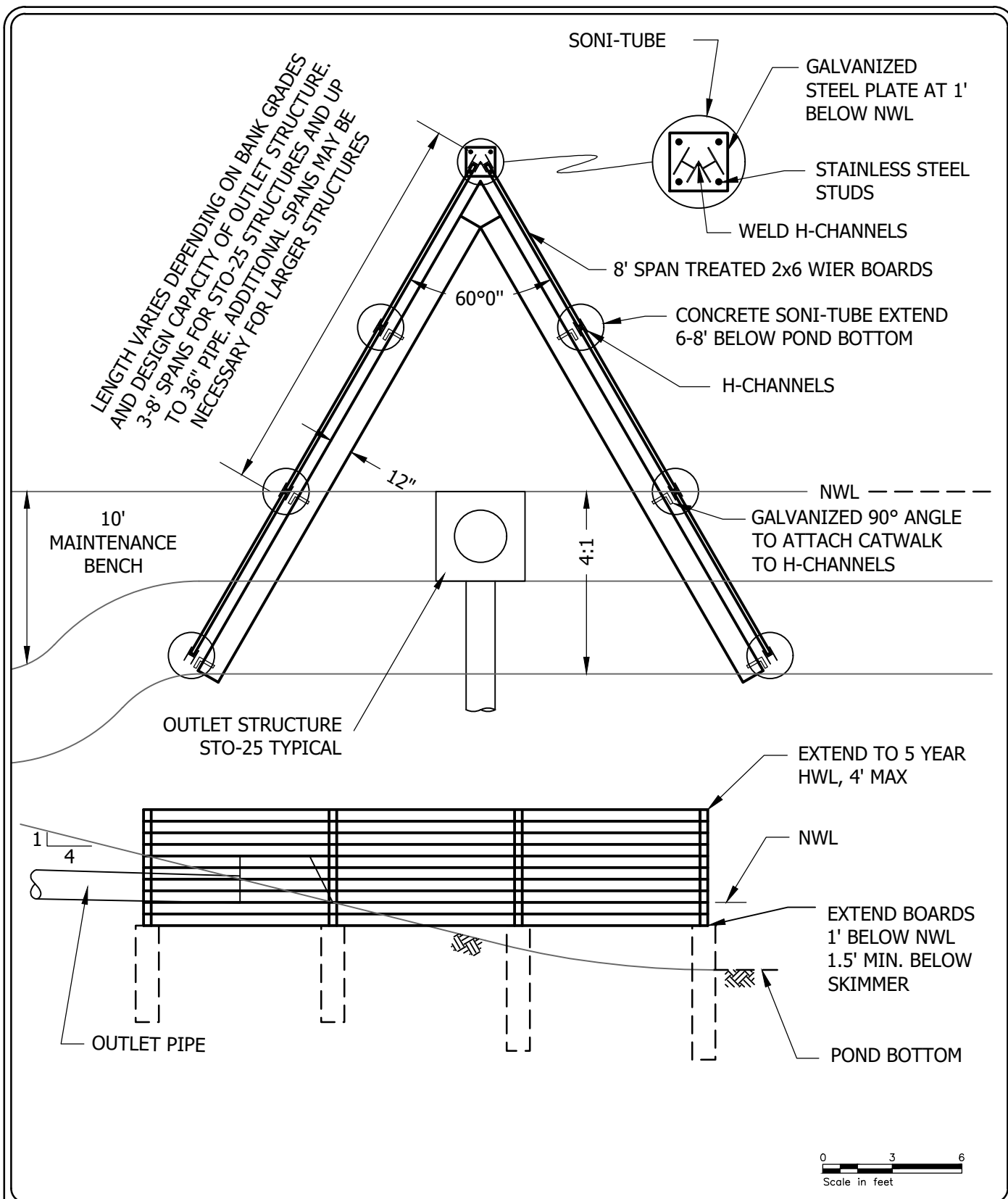


## TYPICAL NURP POND DESIGN

LAST REVISION:  
August 2018

PLATE NO.  
STO-35

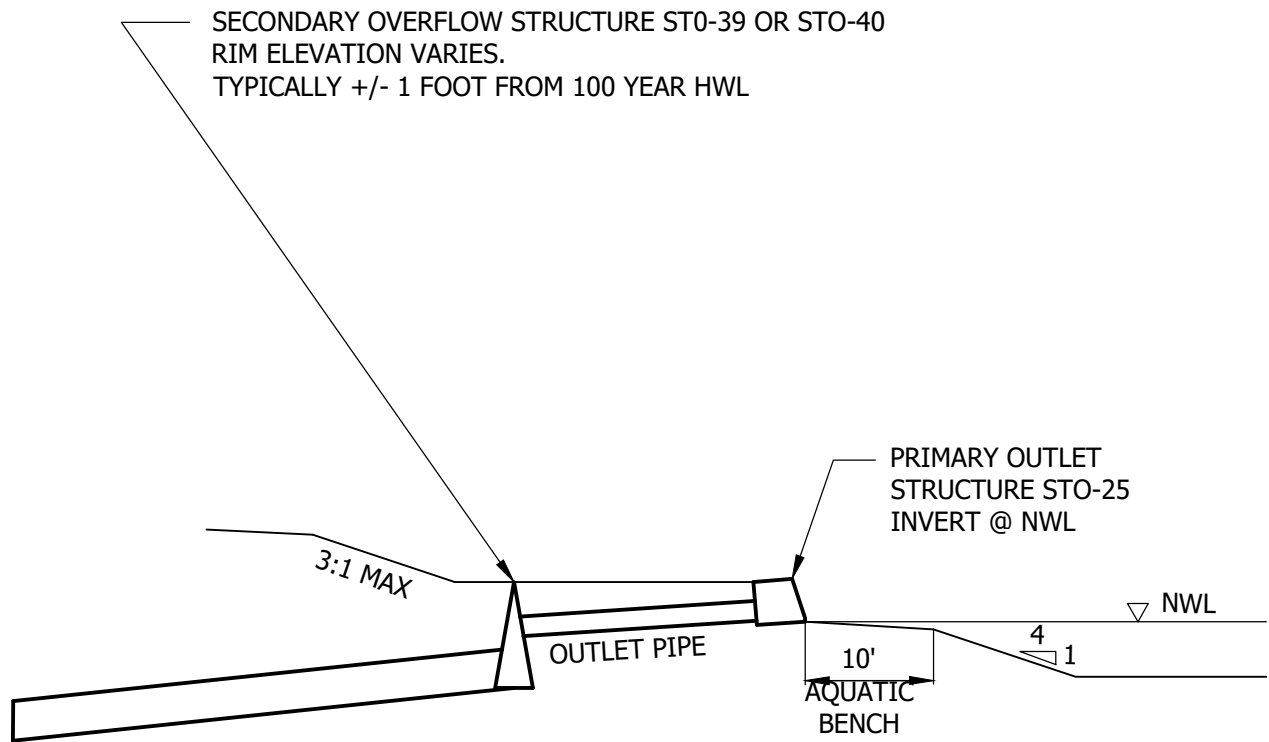




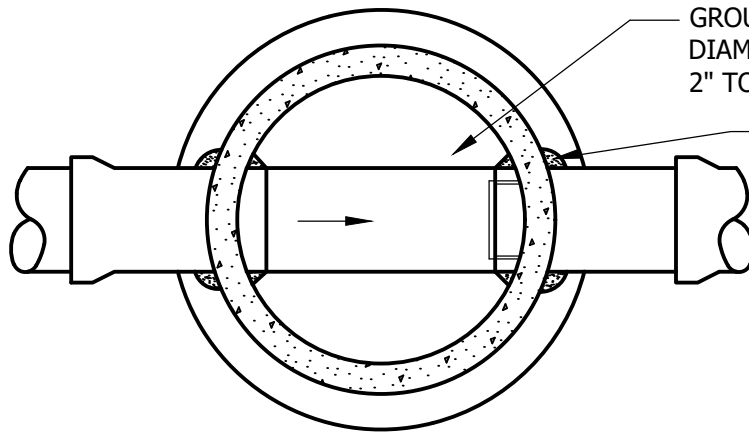
## SKIMMER STRUCTURE

LAST REVISION:  
April 2007

PLATE NO.  
**STO-36**



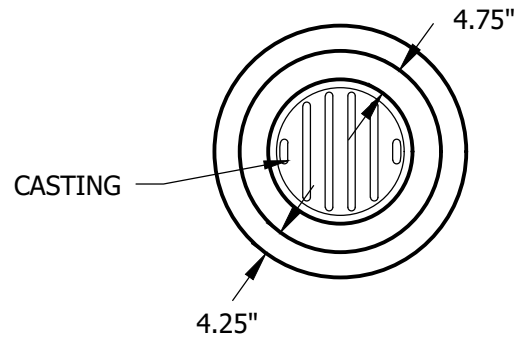
TYPICAL SECTION AT POND OUTLET / DRAIN



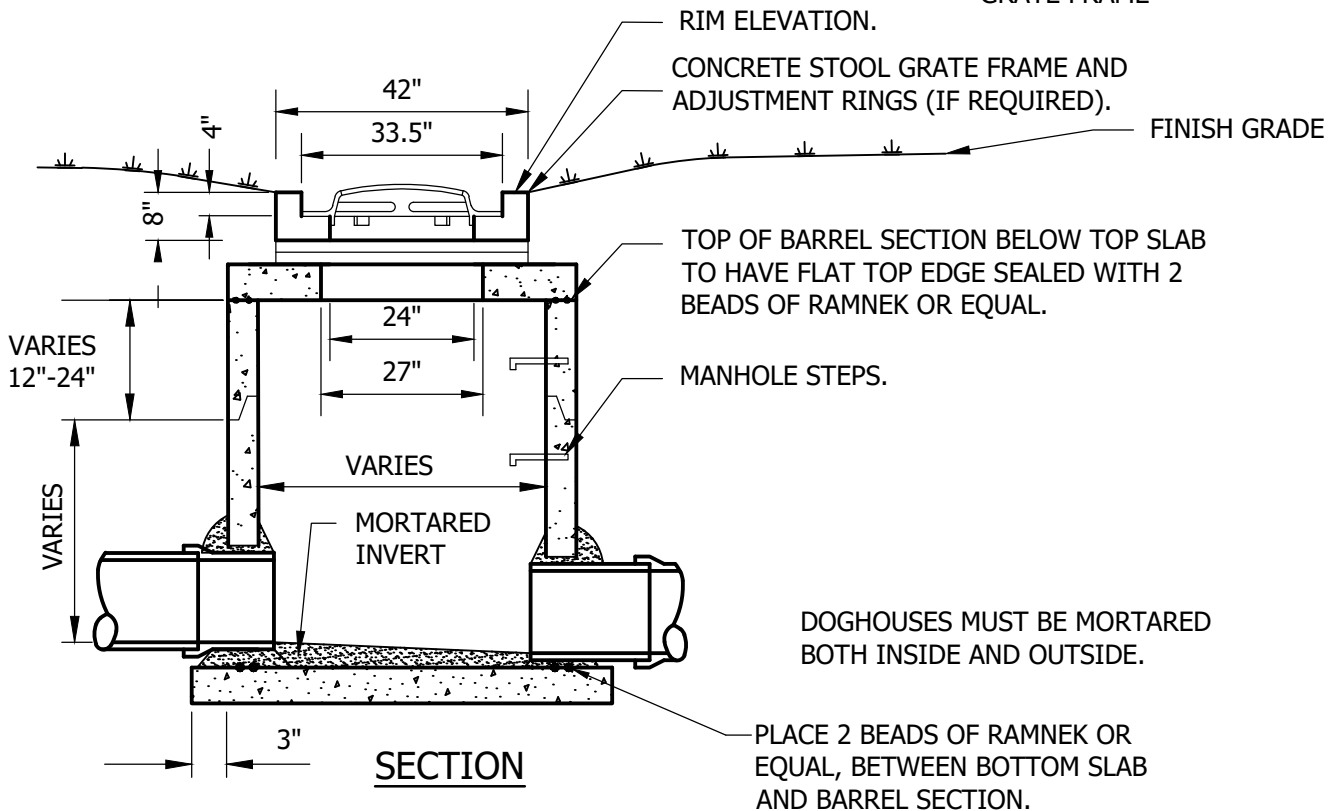
PLAN-INVERT

GROUT BOTTOM OF MANHOLE TO 1/2 DIAMETER AT PIPE AND SLOPE GROUT 2" TOWARD INVERT.

PIPE SHALL BE CUT TO EXTEND INSIDE MANHOLE WALL.



TOP VIEW  
GRATE FRAME



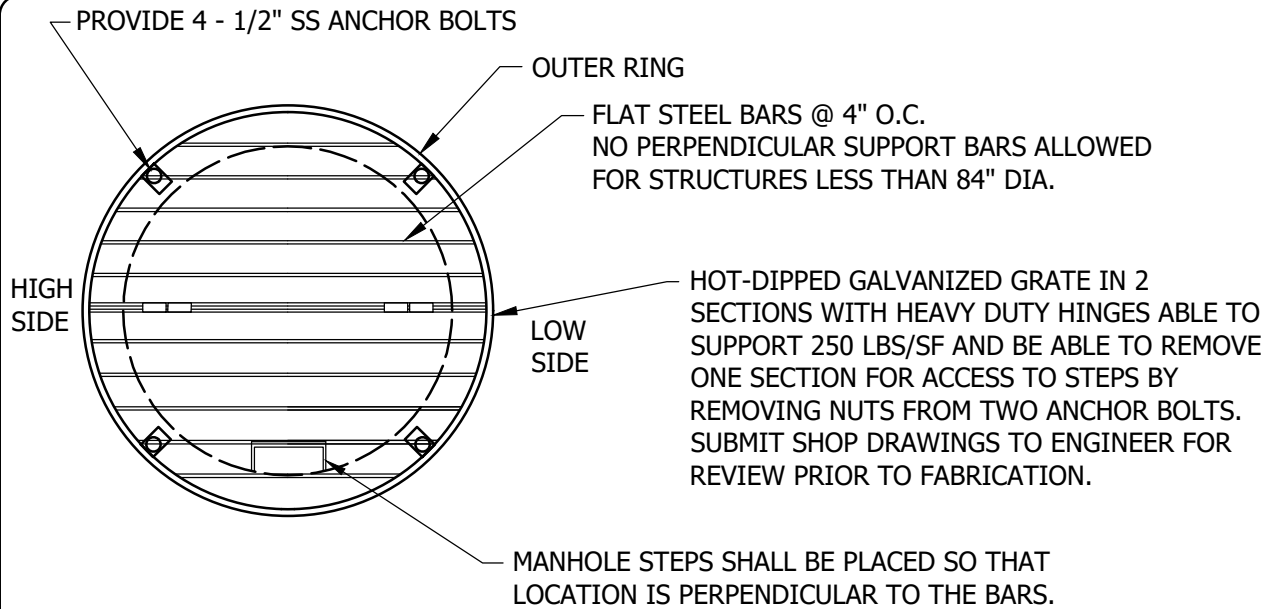
SECTION



## OFF STREET CATCH BASIN WITH CONCRETE STOOL GRATE FRAME

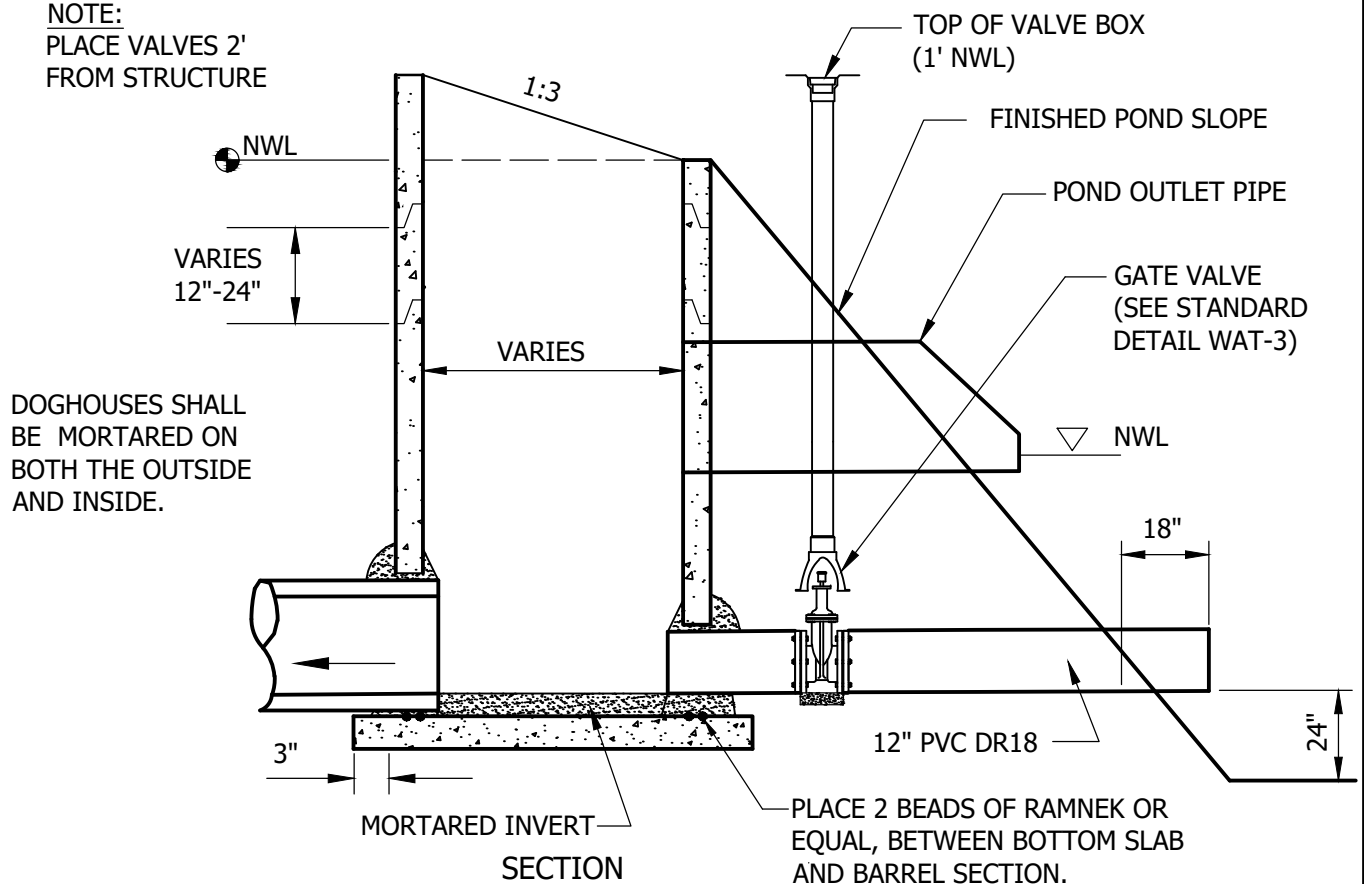
LAST REVISION:  
November 2019

PLATE NO.  
**STO-38**



GRATE DETAIL

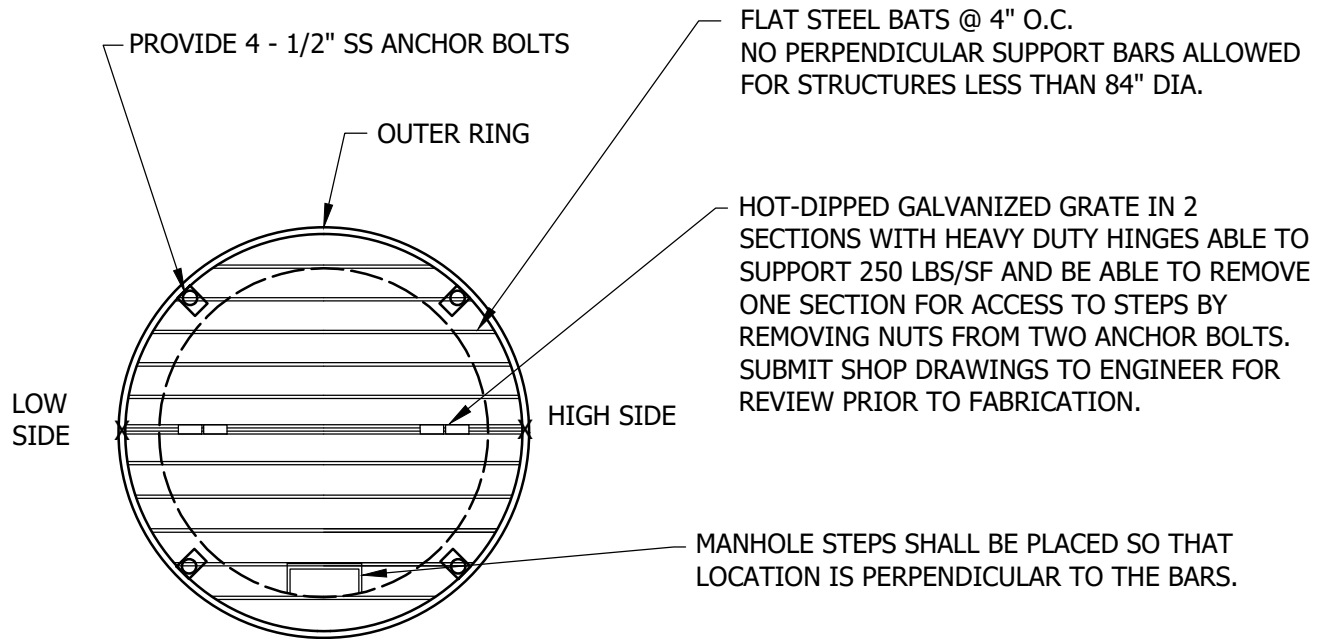
NOTE:  
PLACE VALVES 2'  
FROM STRUCTURE



# OUTLET STRUCTURE WITH POND DRAW DOWN PIPE AND GATE VALVE

LAST REVISION:  
December 2019

PLATE NO.  
STO-39



GRATE DETAIL

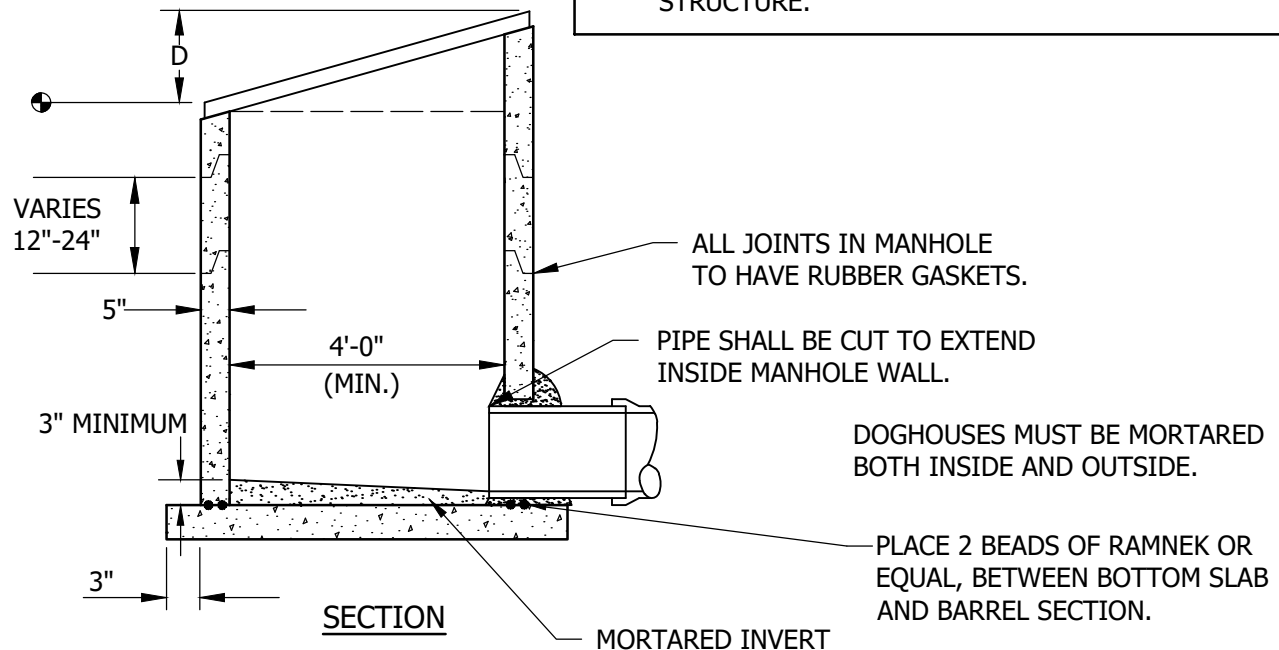
DIAMETER

TOP OF STRUCTURE SLOPE (D)

48" DIA.  
>48" DIA.

9", 12", OR 18"  
12" OR 24"

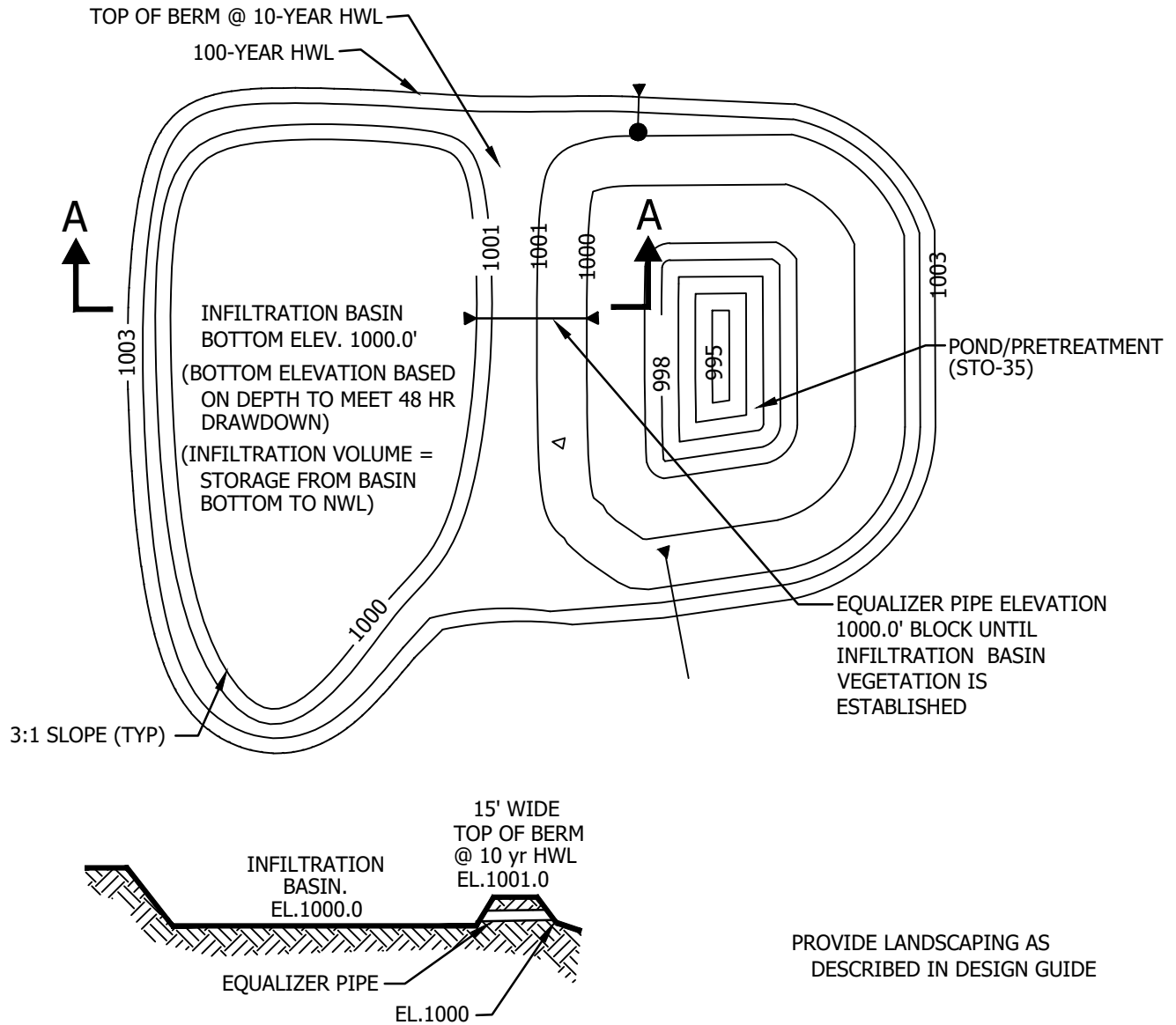
SEE STORM SEWER SCHEDULE FOR SPECIFIC  
STRUCTURE.



OVERFLOW STRUCTURE  
WITH TRASH GUARD

LAST REVISION:  
November 2019

PLATE NO.  
STO-40



## SECTION A-A



## TYPICAL POND AND INFILTRATION BASIN LAYOUT

LAST REVISION:  
January 2020

PLATE NO.  
**STO-42**

# INDEX

City  
Plate  
No.

## SECTION 4 - BEDDING

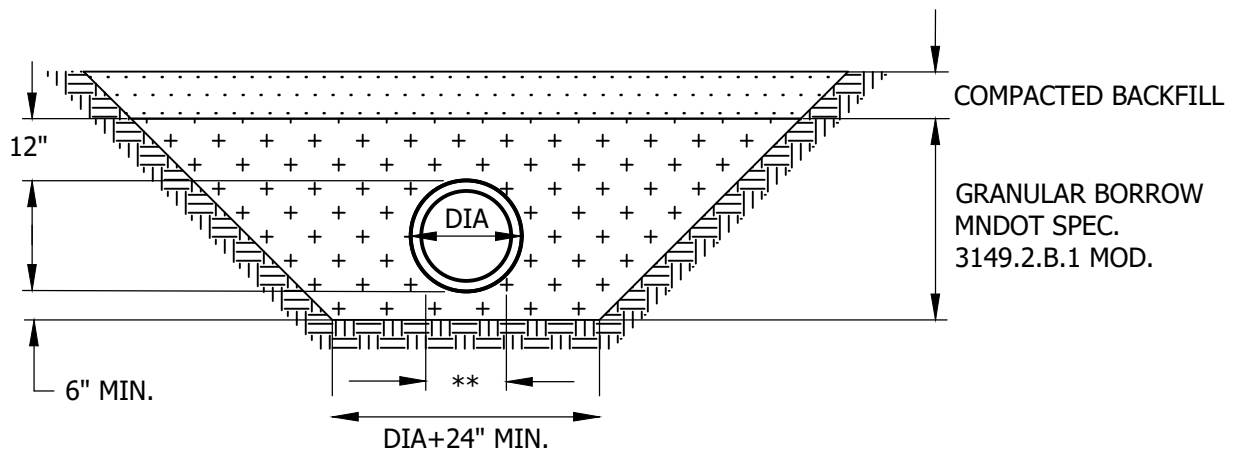
BED-1	PIPE FOUNDATION & BEDDING METHODS FOR PVC & POLYPROPYLENE PIPE
BED-2	PIPE FOUNDATION & BEDDING METHODS FOR RCP & DIP
BED-3	IMPROVED PIPE FOUNDATION FOR RCP, DIP, PVC & POLYPROPYLENE PIPE
BED-4	PIPE BEDDING IN ROCK FOR PVC, RCP & DIP



## SECTION 4 - BEDDING INDEX

LAST REVISION:  
November 2017

PLATE NO.



DIA = OUTSIDE DIAMETER OF PIPE

\*\* = BEDDING DIA/3 WIDE.  
LOOSELY PLACED /  
UNCOMPACTED MATERIAL.

PVC AND POLYPROPYLENE PIPE FOUNDATION & BEDDING  
GOOD SOILS

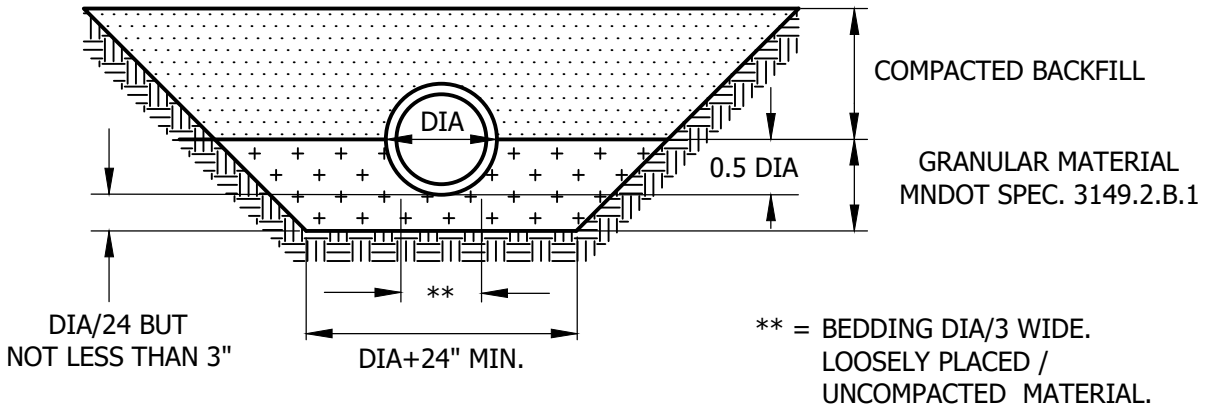


PIPE FOUNDATION & BEDDING  
METHOD FOR PVC &  
POLYPROPYLENE PIPE TRENCH

LAST REVISION:  
January 2018

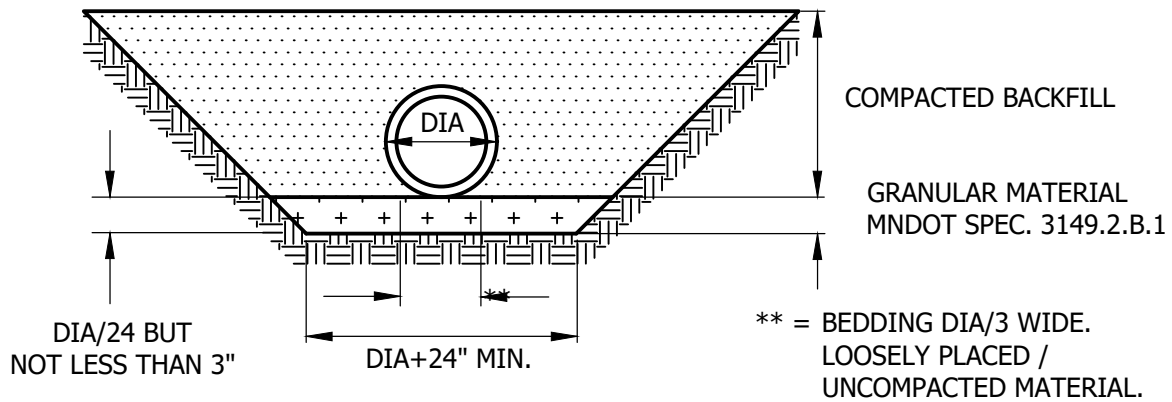
PLATE NO.  
BED-1





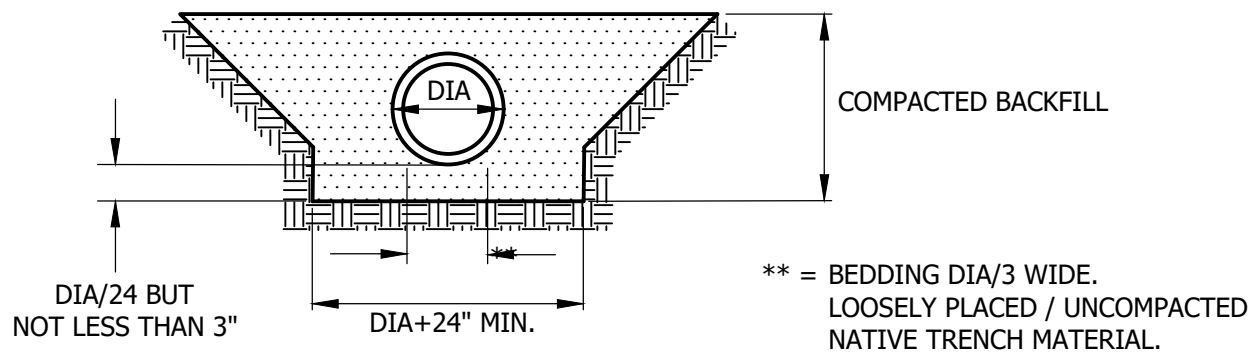
INSTALLATION TYPE 1

DIA = OUTSIDE DIAMETER OF PIPE



INSTALLATION TYPE 2

DIA = OUTSIDE DIAMETER OF PIPE



INSTALLATION TYPE 3

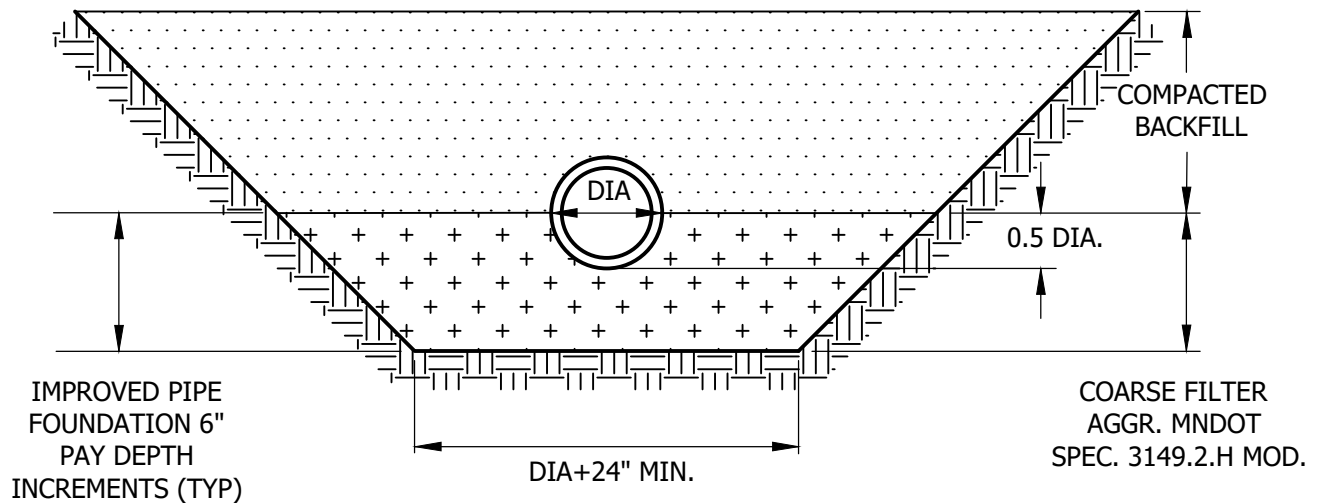
DIA = OUTSIDE DIAMETER OF PIPE



PIPE FOUNDATION & BEDDING  
METHODS FOR RCP & DIP

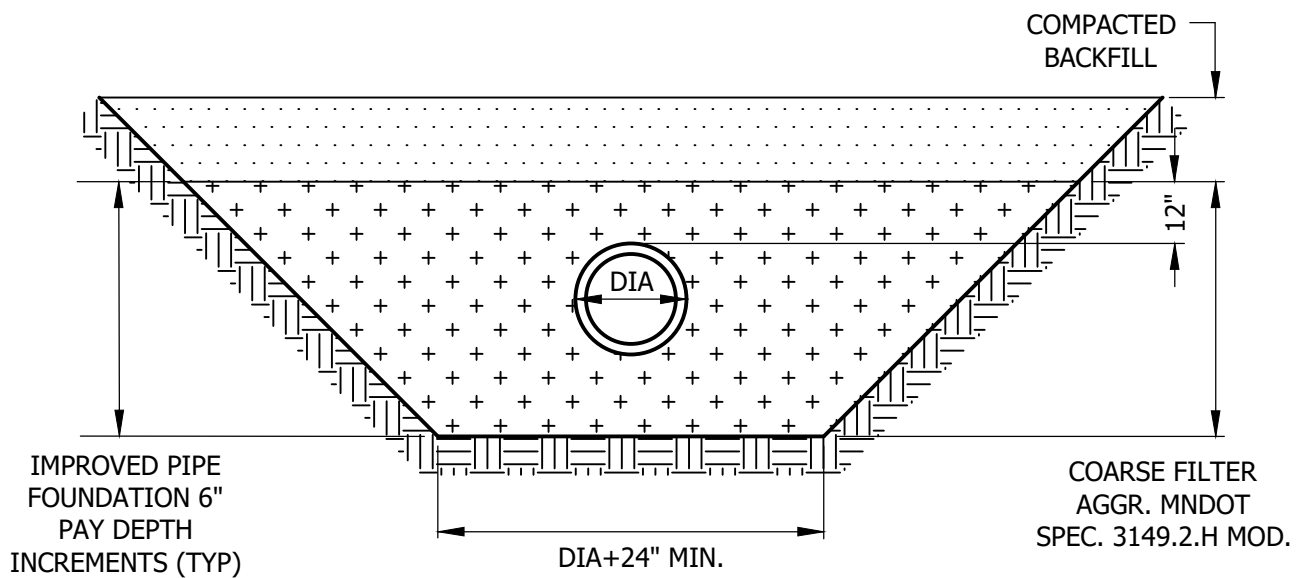
LAST REVISION:  
January 2018

PLATE NO.  
BED-2



DIA = OUTSIDE DIAMETER OF PIPE

### RCP & DIP PIPE



DIA = OUTSIDE DIAMETER OF PIPE

### PVC & POLYPROPYLENE PIPE

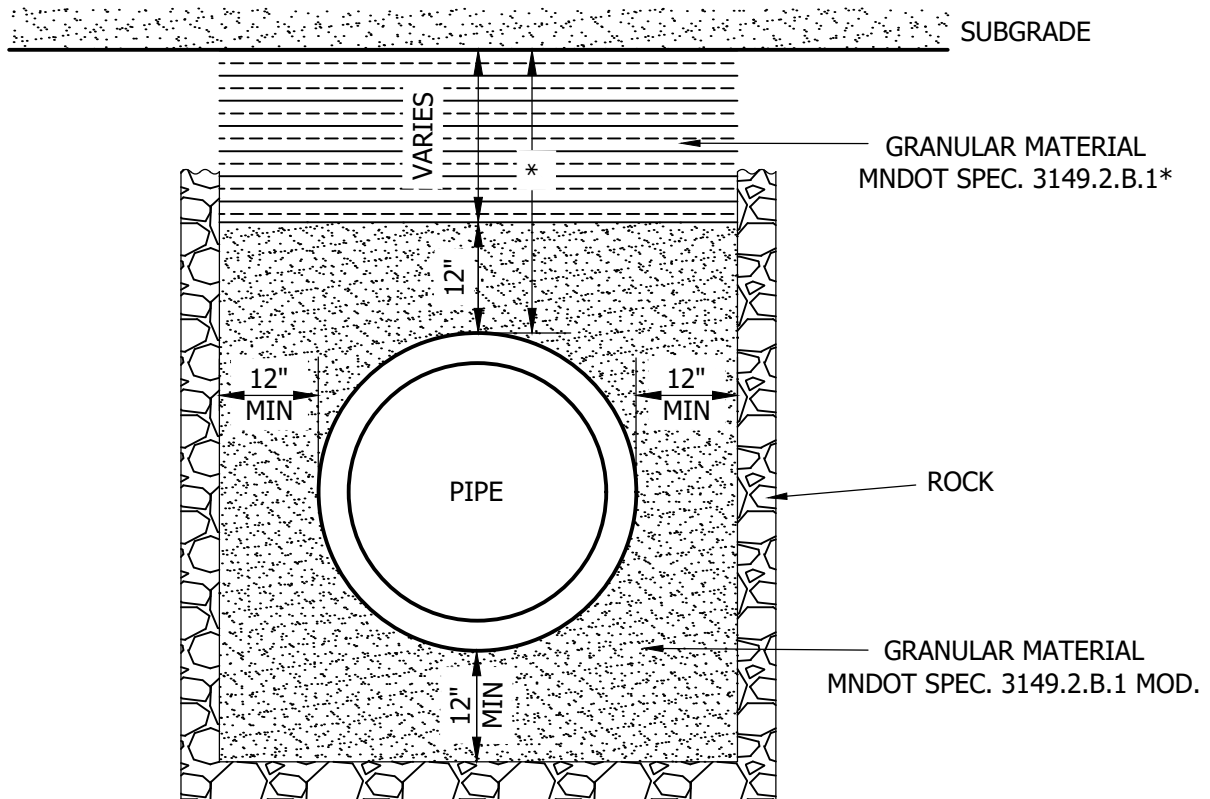


## IMPROVED PIPE FOUNDATION FOR RCP, DIP, PVC & POLYPROPYLENE PIPE TRENCH

LAST REVISION:  
January 2018

PLATE NO.  
**BED-3**

\*USE GRANULAR BORROW WHEN TOP OF PIPE IS WITHIN 3 FEET OF SUBGRADE.  
IF GREATER THAN 3 FEET, USE SUITABLE EXISTING ONSITE BACKFILL.



PIPE BEDDING IN ROCK  
FOR PVC, POLYPROPYLENE,  
RCP & DIP PIPE

LAST REVISION:  
January 2020

PLATE NO.  
**BED-4**

# INDEX

City  
Plate  
No.

## SECTION 5 - SERVICES

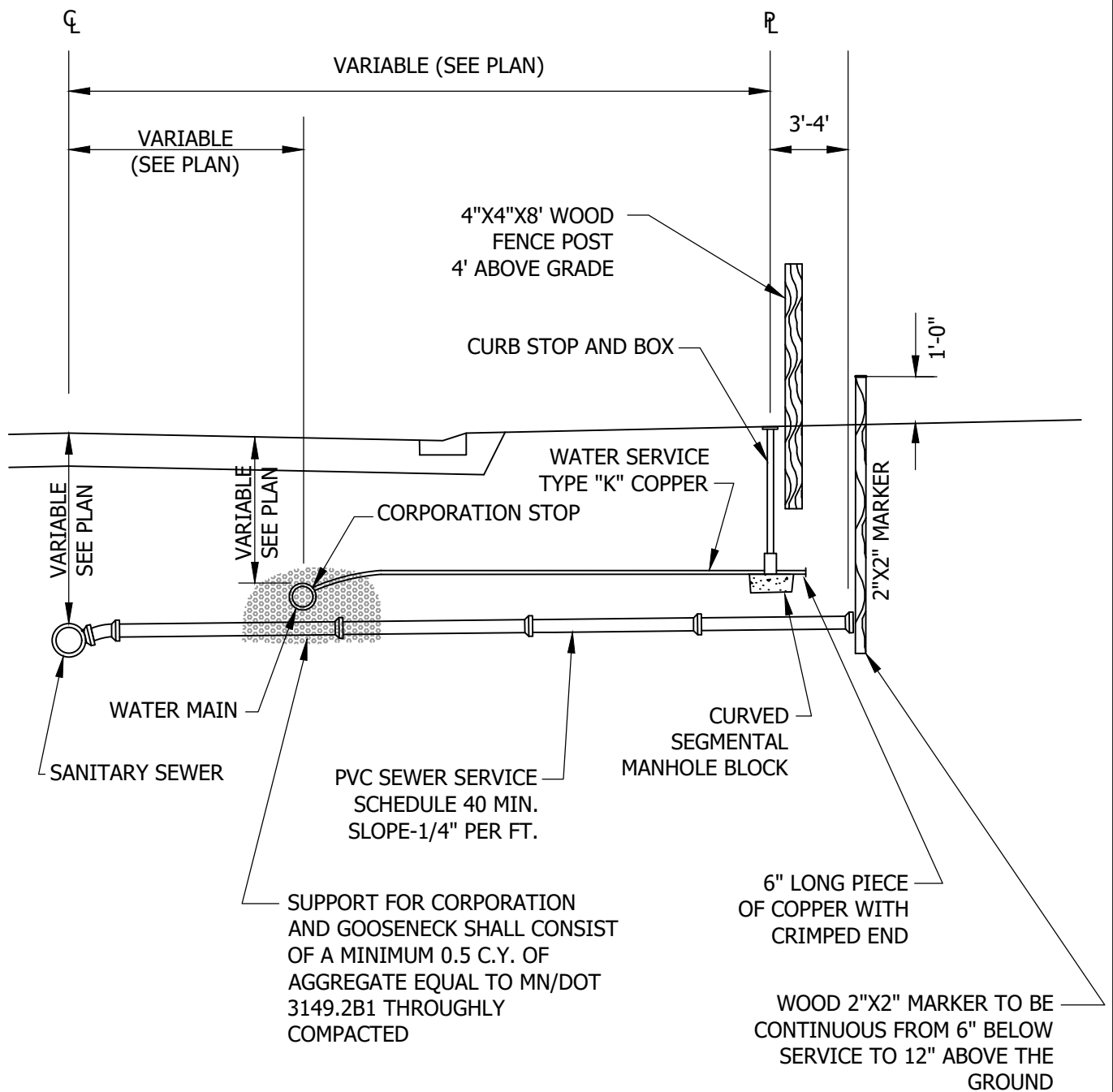
SER-1	SEWER AND WATER SERVICE CONNECTIONS
SER-1A	SEWER AND WATER SERVICE CONNECTIONS
SER-1B	MULTI FAMILY (SLAB ON GRADE) SEWER & WATER SERVICE CONNECTIONS
SER-2	SERVICE RISER
SER-3	PVC SERVICE LINE CLEANOUTS
SER-4	SERVICE CONNECTION TO RCP
SER-5	DIP IRRIGATION SERVICE
SER-5A	DIP IRRIGATION SERVICE BY PRIVATE CONTRACTOR
SER-6	DIP RISER CONNECTION TO RCP
SER-7	PRIVATE CONNECTIONS TO EXISTING PUBLIC UTILITIES
SER-8	CURB BOX AND CLEANOUT PROTECTION IN DRIVEWAY
SER-9	4" WATER AND 6" SEWER SERVICE FOR MULTI-UNIT BUILDINGS
SER-9A	LOCATING REQUIREMENTS FOR SINGLE FAMILY HOUSES
SER-9B	LOCATING REQUIREMENTS FOR MULTI-UNIT BUILDINGS
SER-10	2" POLYETHYLENE PIPE IRRIGATION SERVICE
SER-10A	POLYETHYLENE IRRIGATION SERVICE BY PRIVATE CONTRACTOR



## SECTION 5 - SERVICES INDEX

LAST REVISION:  
January 2020

PLATE NO.

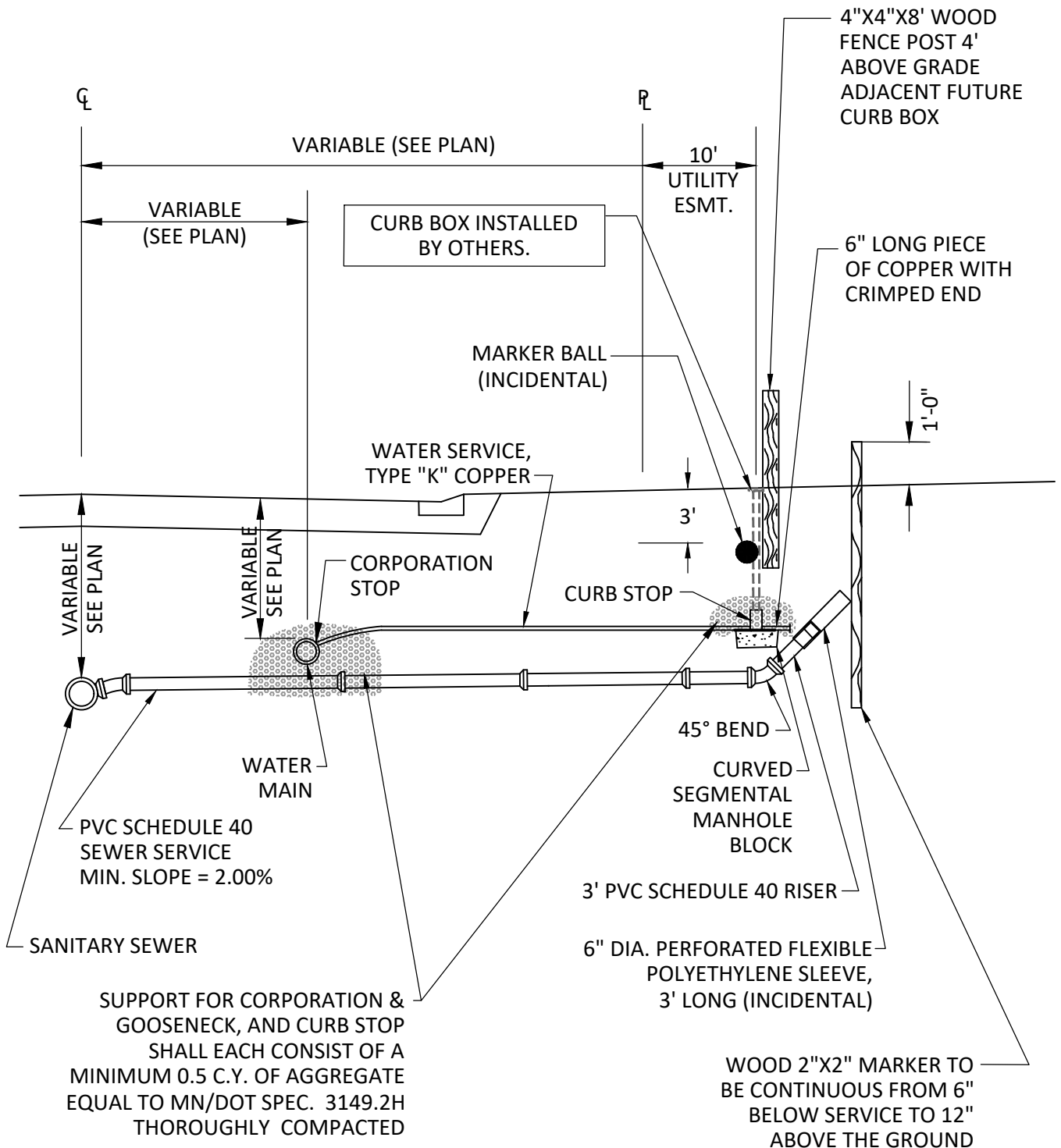


## SEWER AND WATER SERVICE CONNECTIONS

LAST REVISION:  
April 2000

PLATE NO.  
SER-1

NOTE:  
ALL FITTINGS AND APPURTENANCES FROM SANITARY  
SEWER MAIN TO 6" PVC PLUG ARE INCIDENTAL.

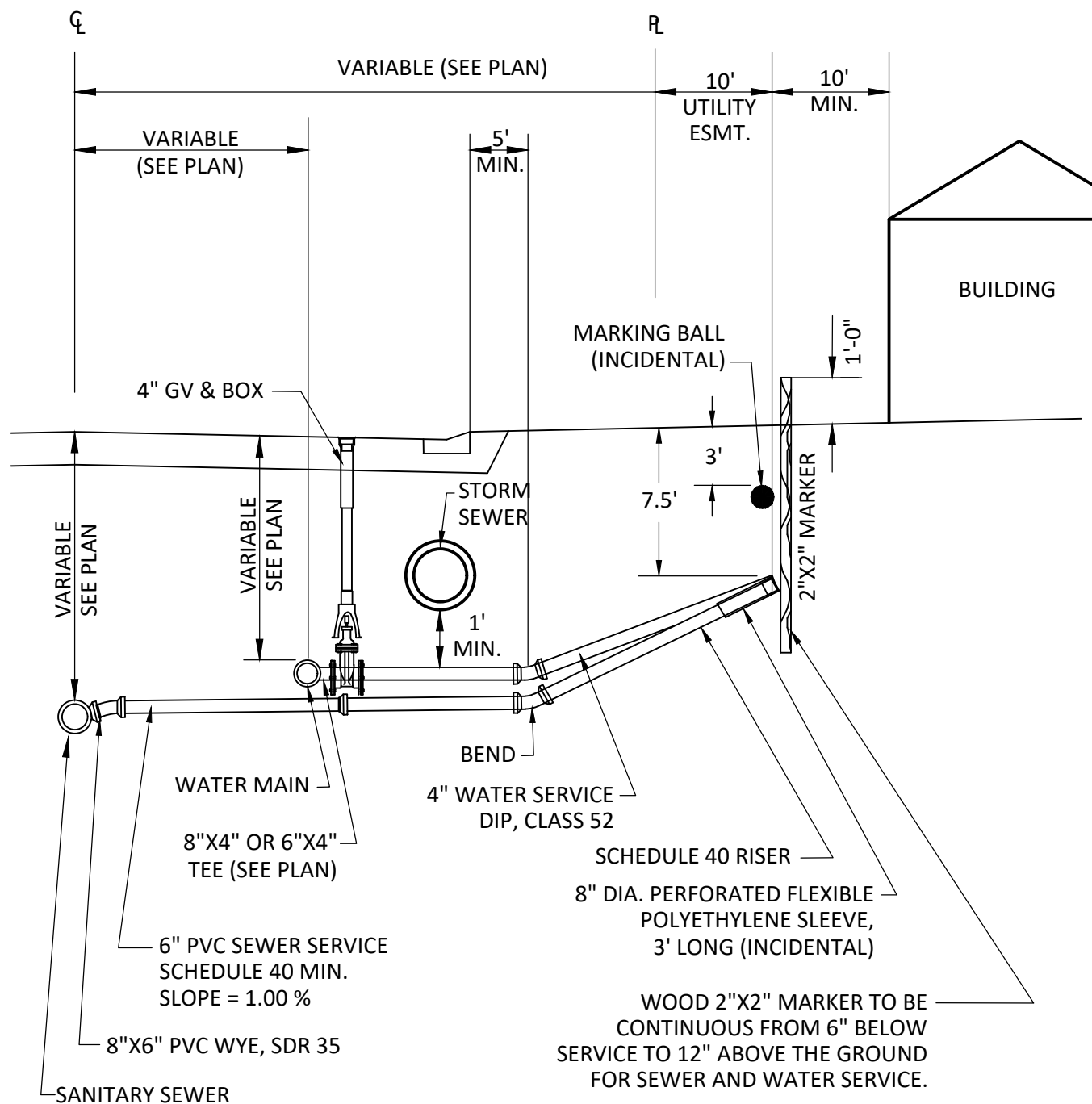


## SEWER AND WATER SERVICE CONNECTIONS

LAST REVISION:  
November 2017

PLATE NO.  
**SER-1A**

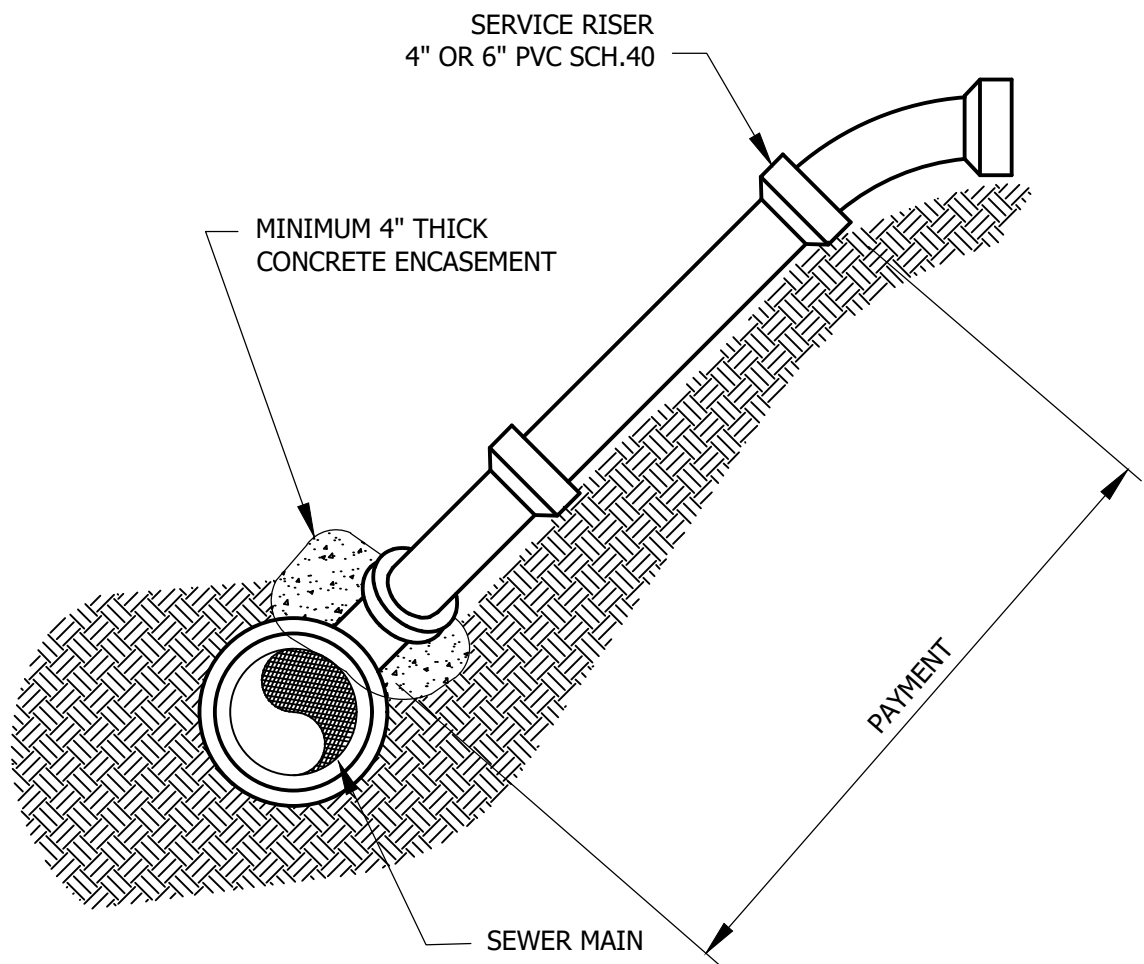
NOTE: ALL FITTINGS AND APPURTENANCES FROM  
SANITARY SEWER MAIN TO 8" PVC SLEEVE IS INCIDENTAL.



## MULTI FAMILY (SLAB ON GRADE) SEWER AND WATER SERVICE CONNECTIONS

LAST REVISION:  
November 2017

PLATE NO.  
SER-1B



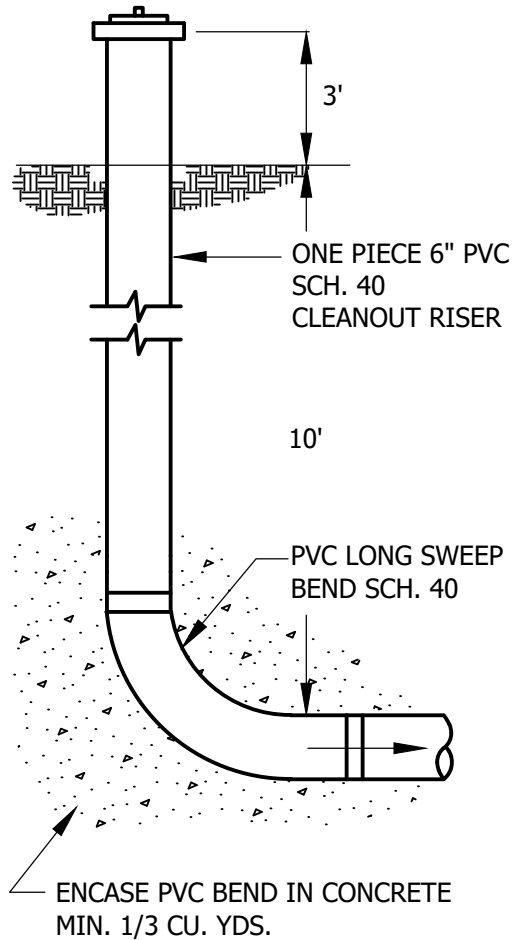
SERVICE RISER

LAST REVISION:  
April 2004

PLATE NO.  
SER-2

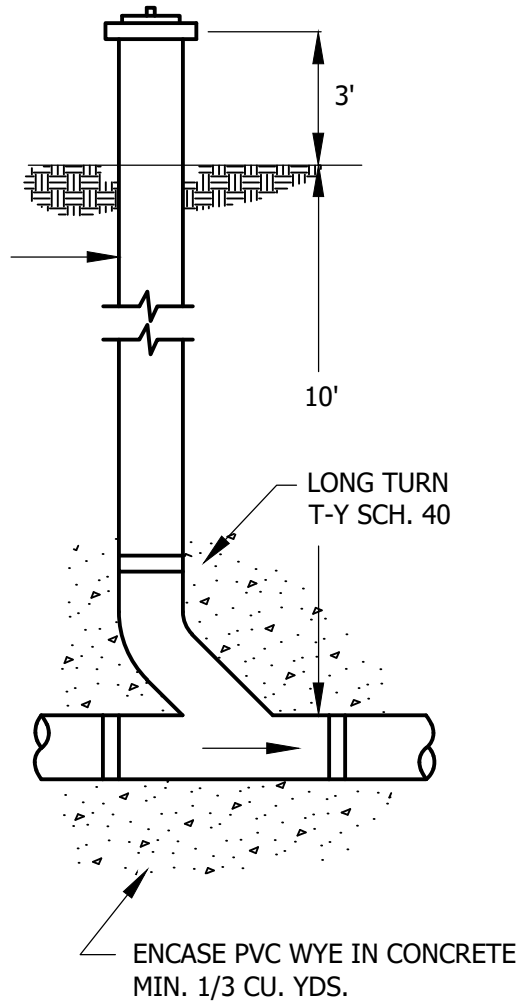


NOTE:  
6" HUB WITH THREADED  
PVC PLUG - DO NOT GLUE



END OF LINE CLEANOUT

NOTE:  
ENCLOSE LONG SWEEP BEND  
OR COMBINATION WYE IN  
CONCRETE AS SHOWN.



IN LINE CLEANOUT

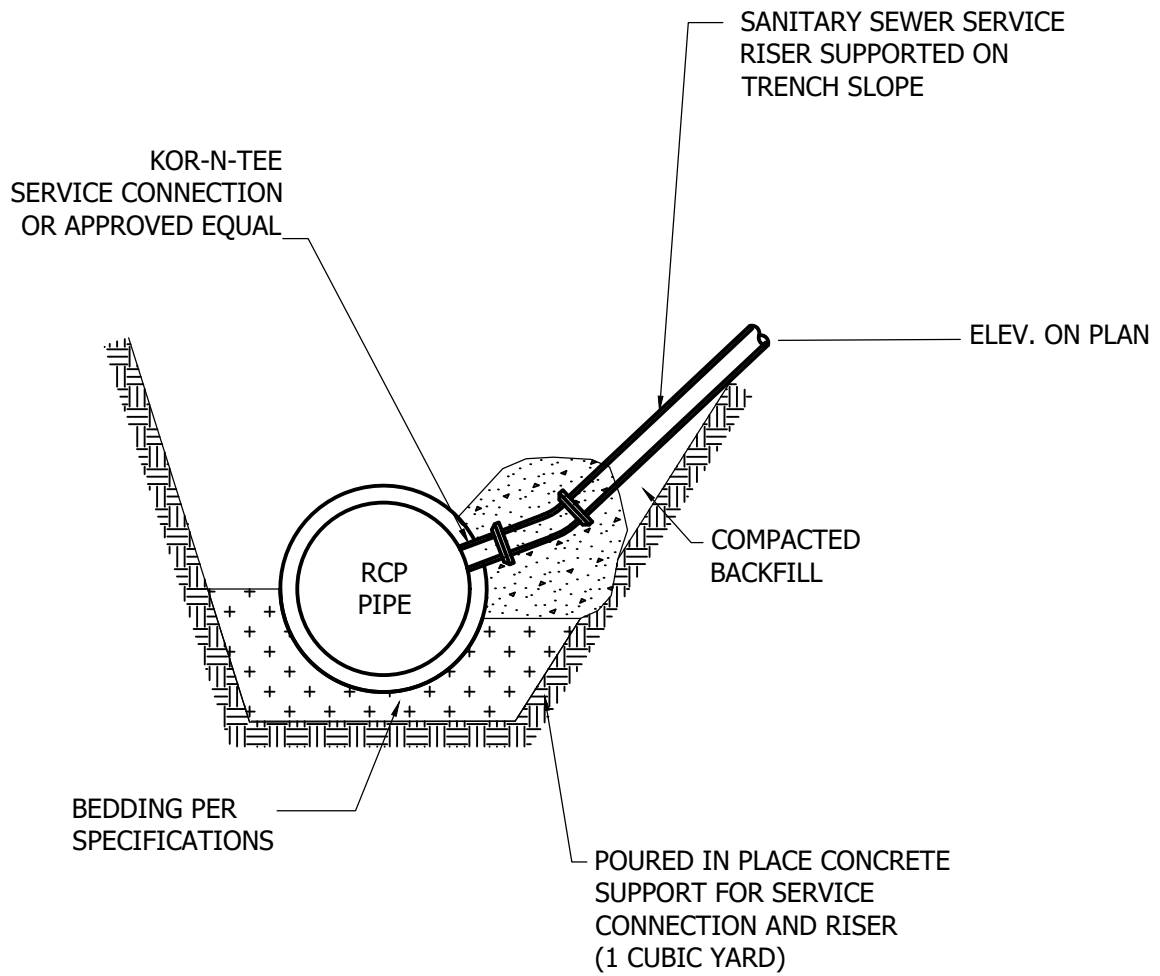


## PVC SERVICE LINE CLEANOUTS

LAST REVISION:  
April 2000

PLATE NO.  
SER-3

NOTE:  
SERVICE CONNECTIONS TO  
BE AT 2:00 OR 10:00



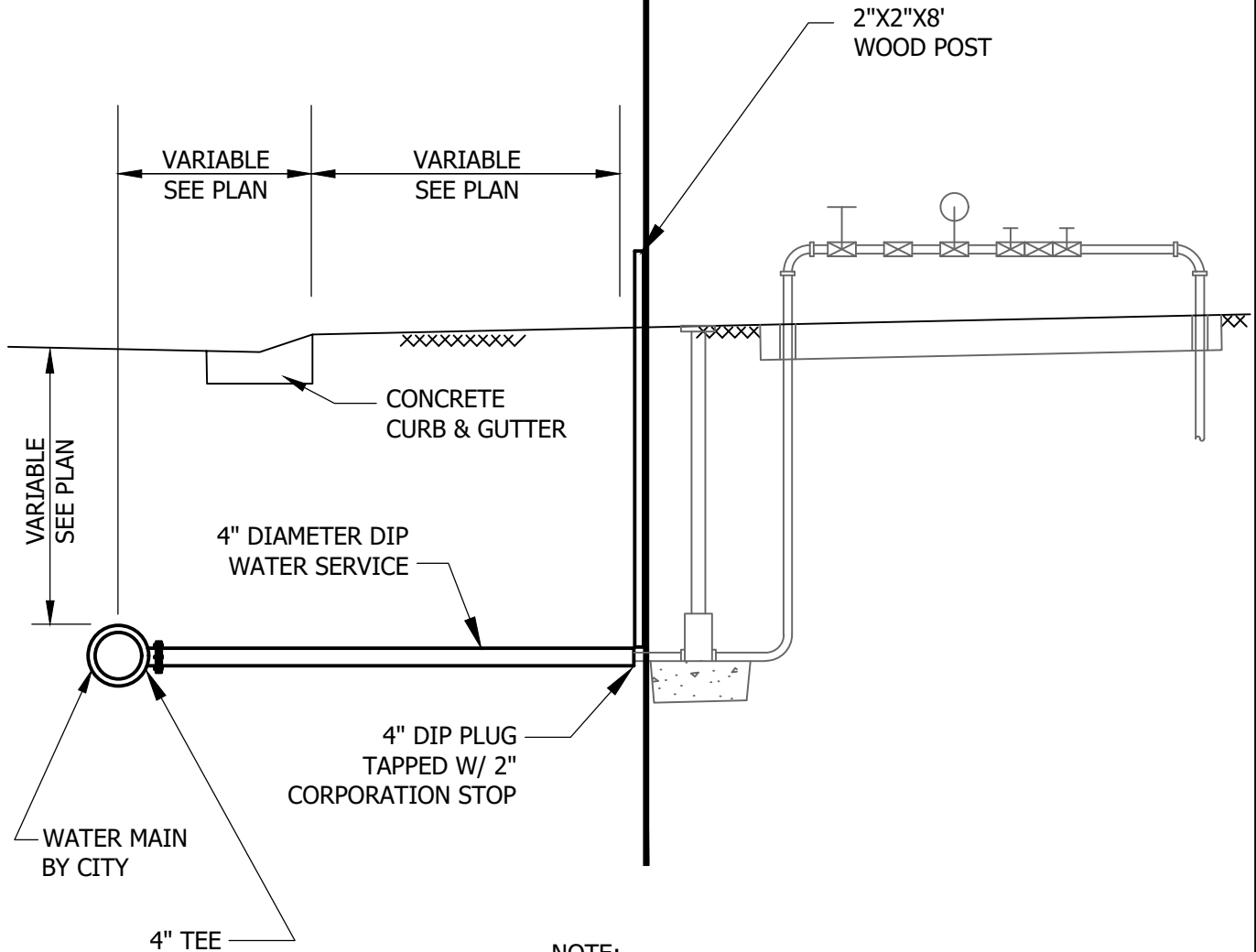
## SERVICE CONNECTION TO RCP

LAST REVISION:  
December 2019

PLATE NO.  
SER-4

WORK BY CITY

WORK BY  
PRIVATE CONTRACTOR



**NOTE:**

2" HDPE PIPE & 2" CORPORATION STOP W/SADDLE  
ALLOWED IN LIEU OF 4" DIP & 4" TEE.  
INSTALL 2" CURB STOP WITH COMPRESSION FITTING  
AT THE END.  
INSTALL 12 GA SOLID COPPER TRACER WIRE ALONG  
ENTIRE LENGTH OF SERVICE.



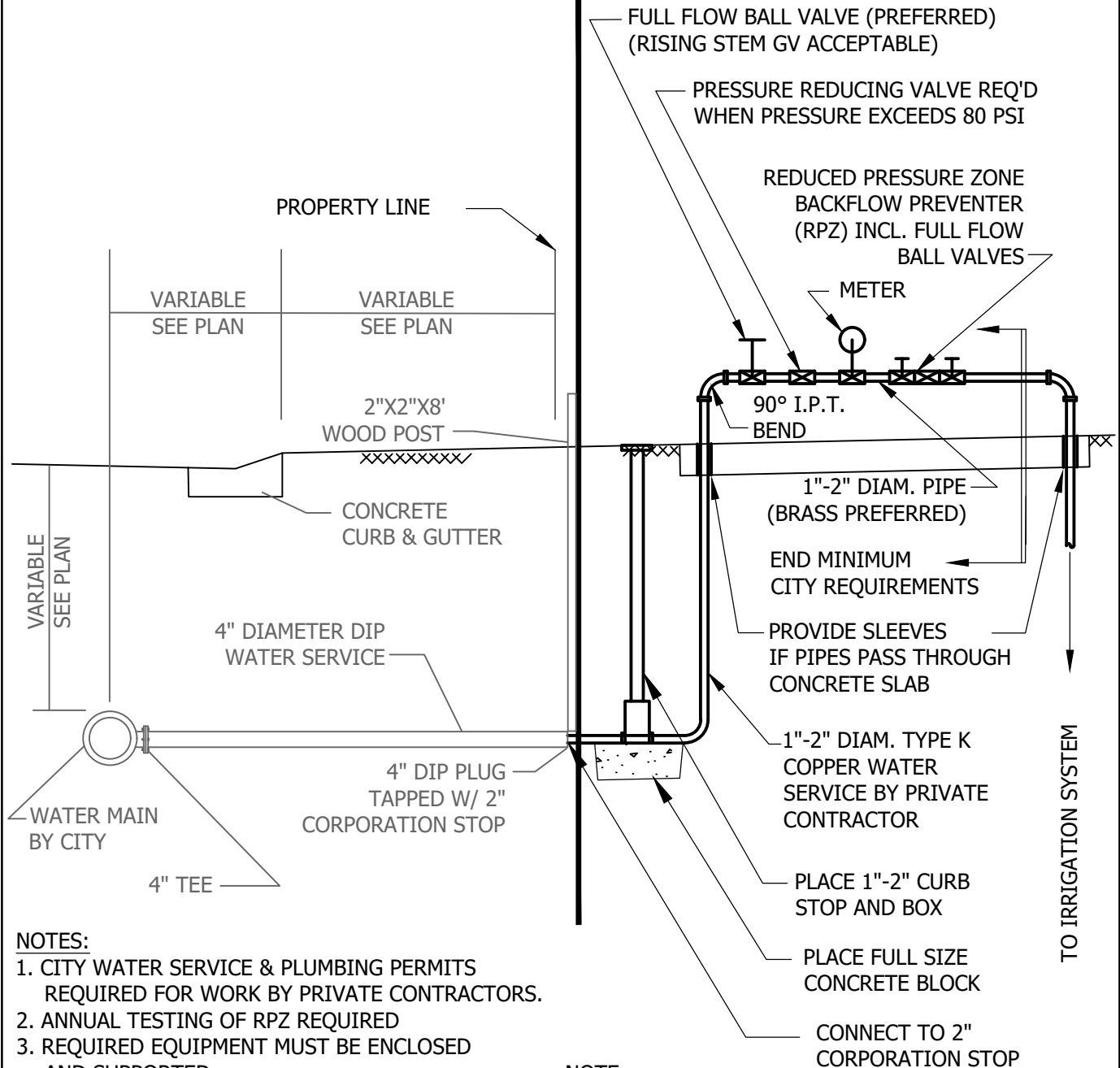
**DIP IRRIGATION SERVICE**

LAST REVISION:  
January 2020

PLATE NO.  
**SER-5**

WORK BY CITY

WORK BY  
PRIVATE CONTRACTOR



**NOTES:**

1. CITY WATER SERVICE & PLUMBING PERMITS REQUIRED FOR WORK BY PRIVATE CONTRACTORS.
2. ANNUAL TESTING OF RPZ REQUIRED
3. REQUIRED EQUIPMENT MUST BE ENCLOSED AND SUPPORTED.
4. 2" DIAMETER SIZE IS STANDARD. OTHER SIZES ALLOWED ONLY BY APPROVAL OF CITY.
5. SLEEVES FOR PIPES IN CONCRETE SLABS SHALL BE 4" DIAMETER PVC OR SIMILAR.

**NOTE:**

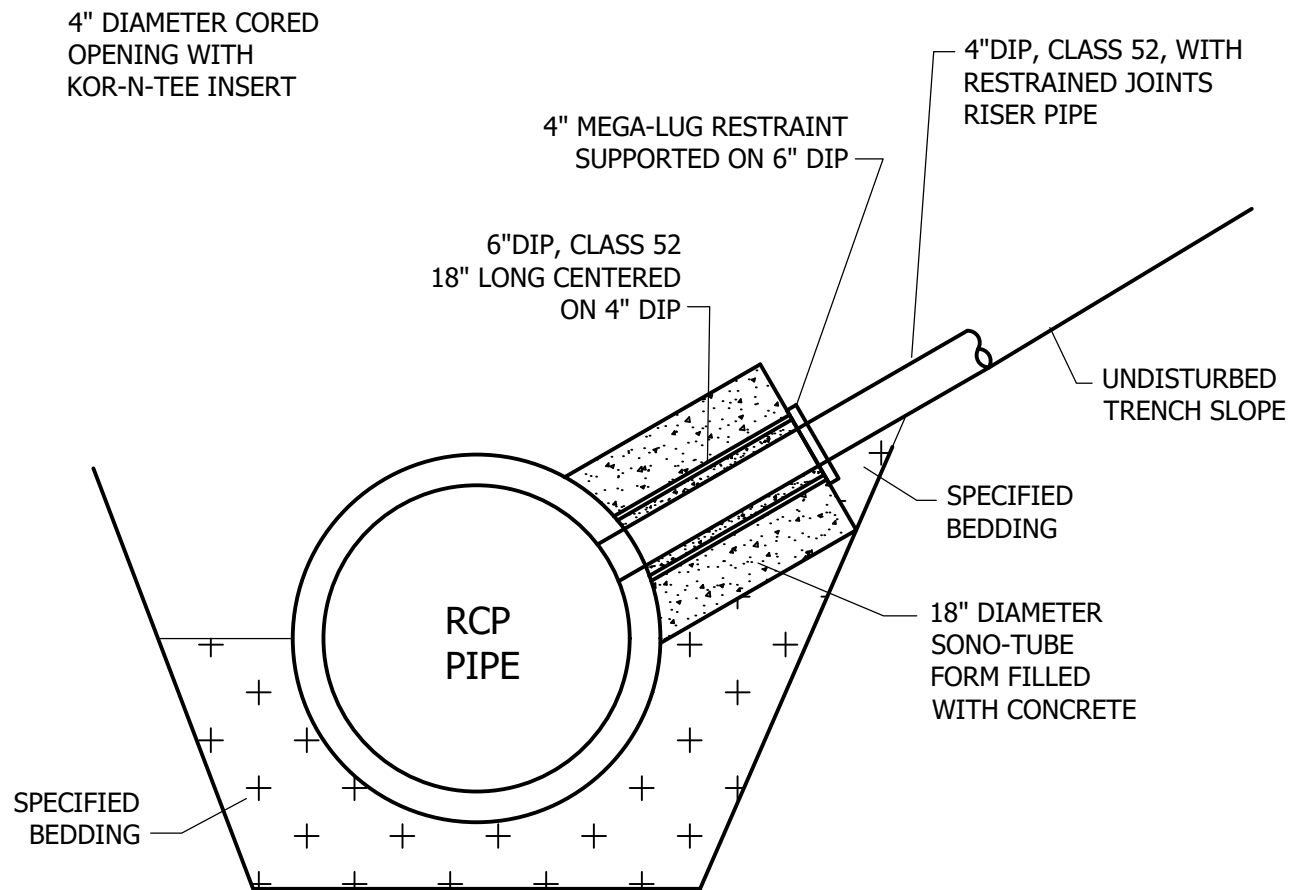
2" HDPE PIPE & 2" CORPORATION STOP W/SADDLE ALLOWED IN LIEU OF 4" DIP & 4" TEE. INSTALL 2" CURB STOP WITH COMPRESSION FITTING AT THE END. INSTALL 12 GA SOLID COPPER TRACER WIRE ALONG ENTIRE LENGTH OF SERVICE.



DIP IRRIGATION SERVICE  
BY PRIVATE CONTRACTOR

LAST REVISION:  
January 2020

PLATE NO.  
SER-5A

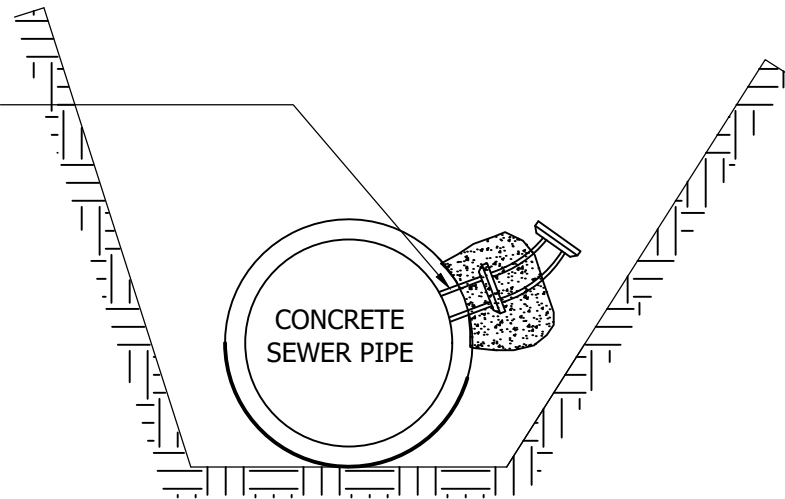


## DIP RISER CONNECTION TO RCP

LAST REVISION:  
April 2000

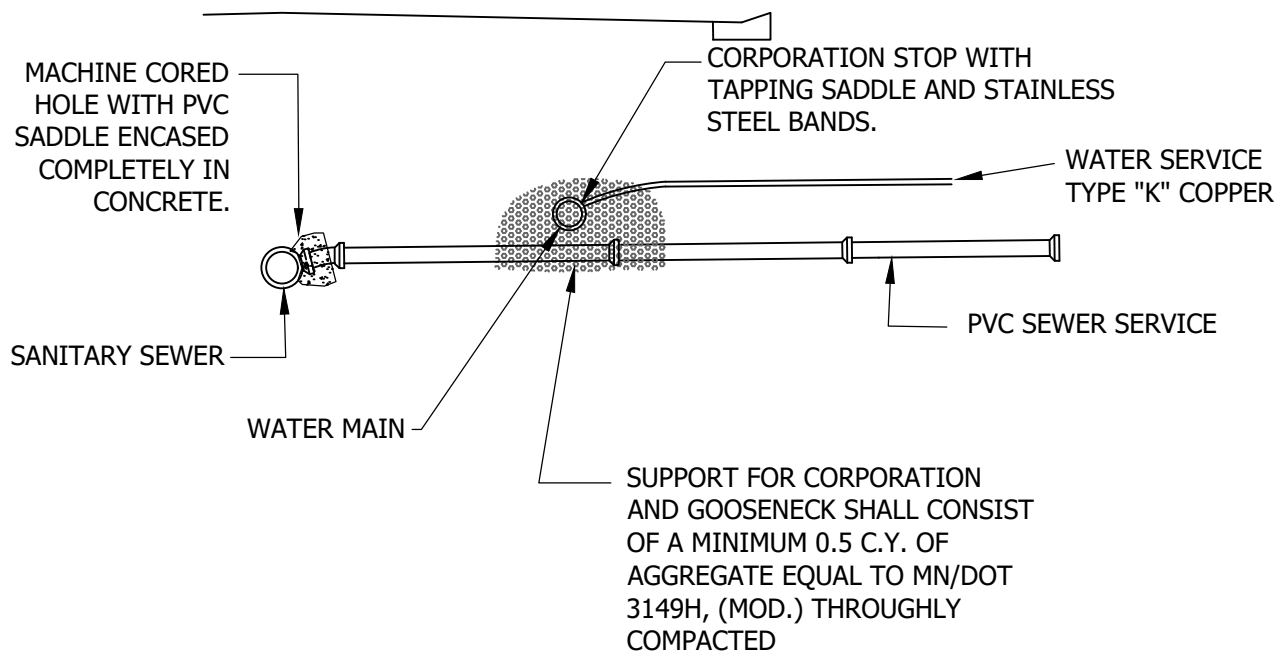
PLATE NO.  
SER-6

MACHINE CORED HOLE  
WITH CAST IRON  
SADDLE WITH STAINLESS  
STEEL BANDS AROUND  
THE PIPE. THE SADDLE TO  
BE COMPLETELY ENCASED  
IN CONCRETE.



## CONCRETE SANITARY OR STORM SEWER

NOTE:  
SERVICE CONNECTIONS TO  
BE AT 2 O'CLOCK OR 10  
O'CLOCK POSITION.



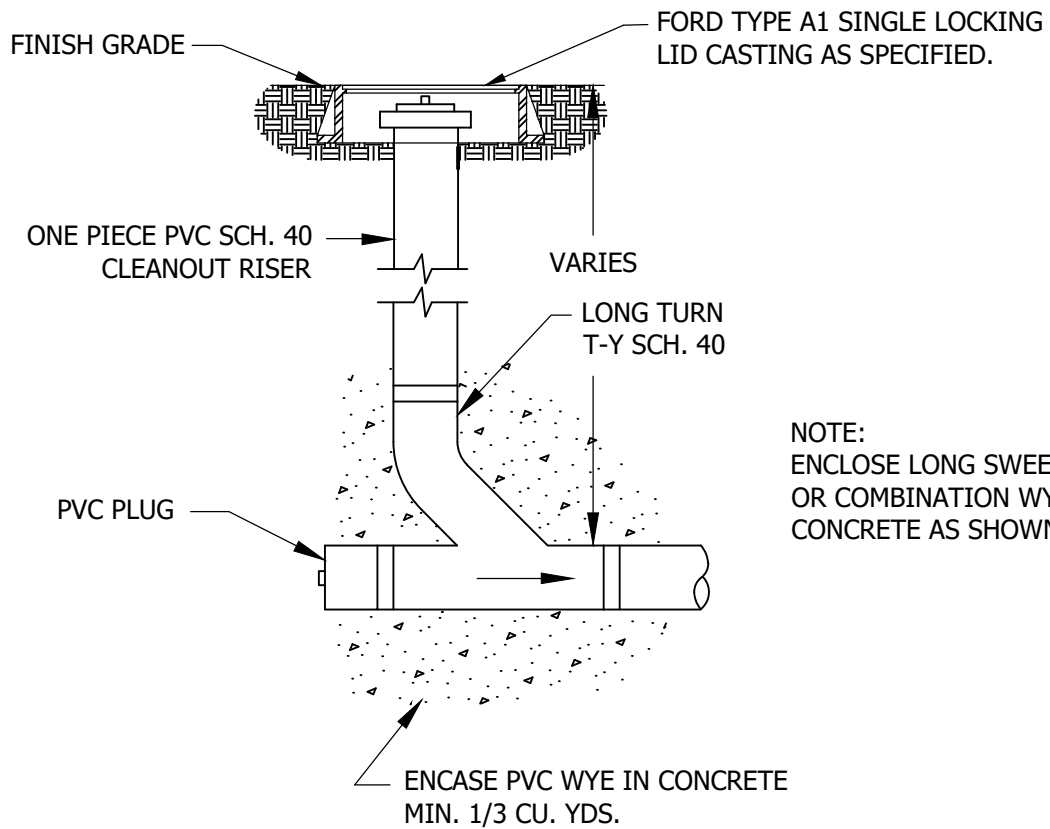
## WATER AND PVC SANITARY SEWER



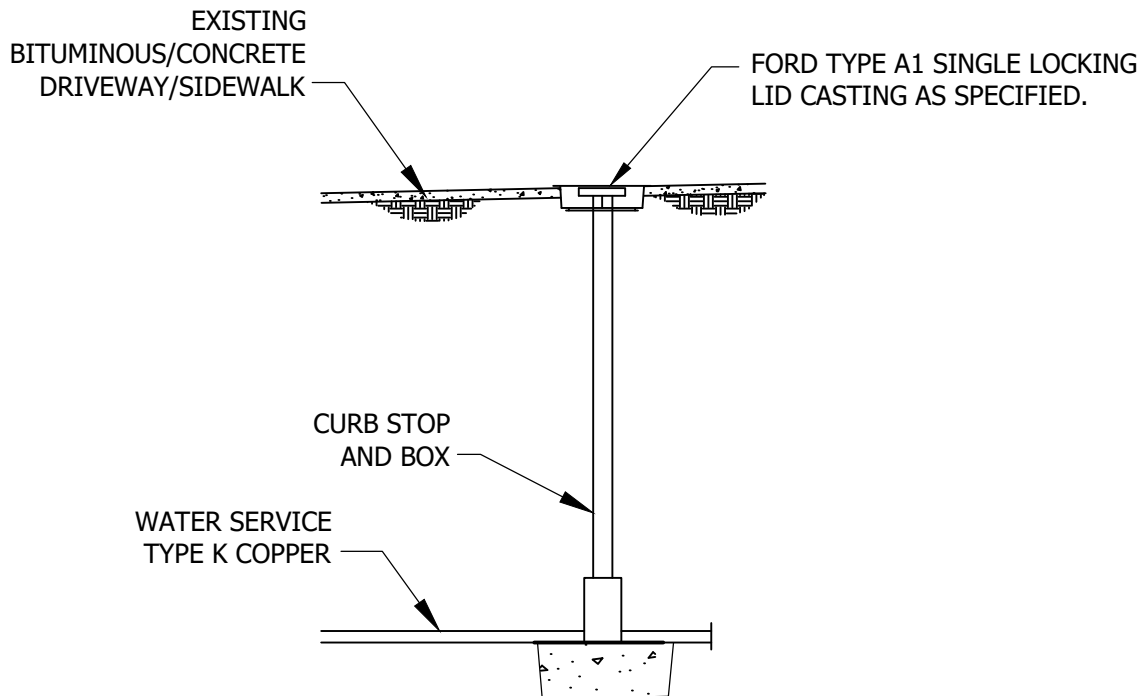
PRIVATE CONNECTIONS TO  
EXISTING PUBLIC UTILITIES

LAST REVISION:  
April 2000

PLATE NO.  
SER-7



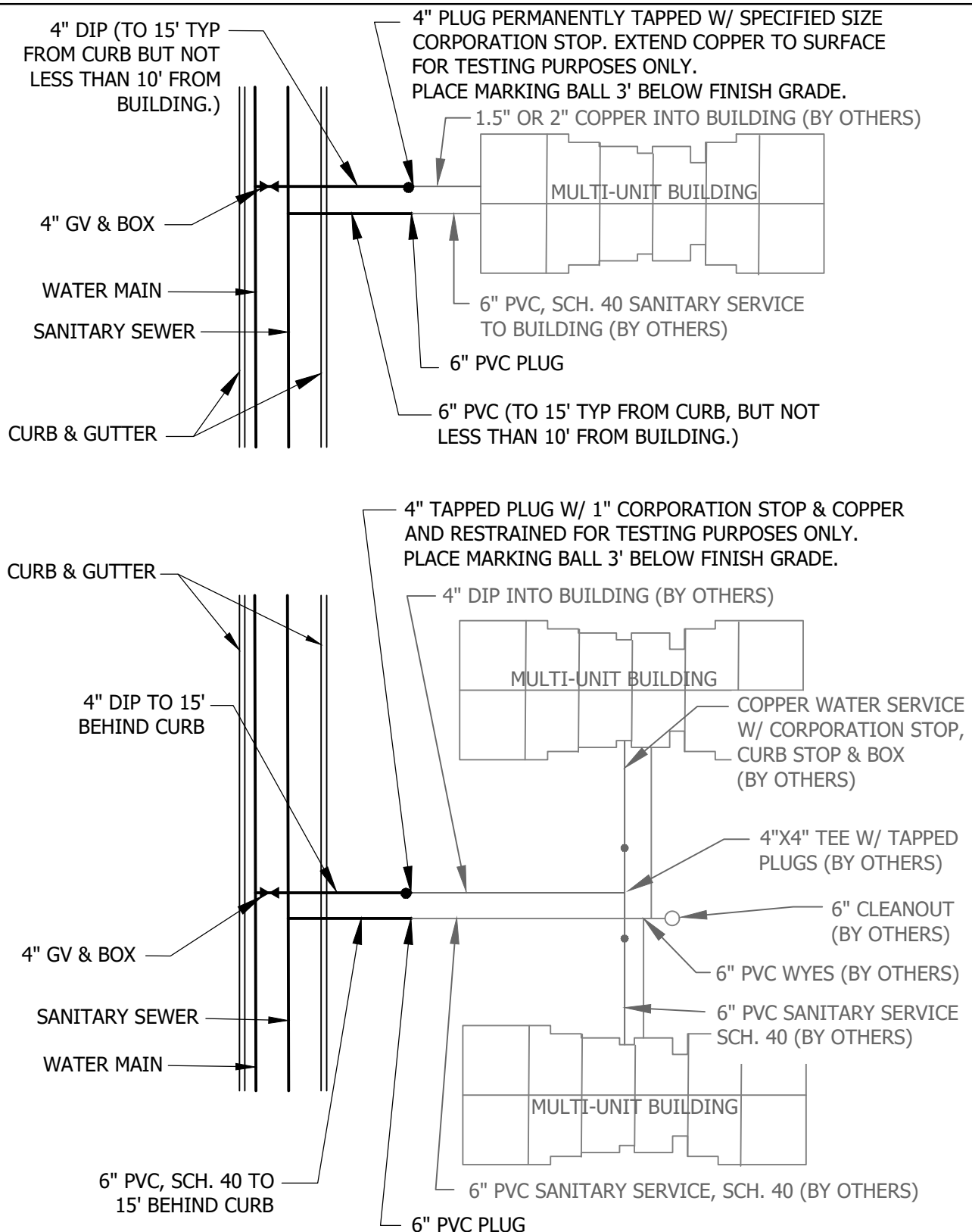
NOTE:  
ENCLOSE LONG SWEEP BEND  
OR COMBINATION WYE IN  
CONCRETE AS SHOWN.



## CURP BOX AND CLEANOUT PROTECTION IN DRIVEWAY

LAST REVISION:  
March 2008

PLATE NO.  
SER-8



## 4" WATER AND 6" SEWER SERVICE FOR MULTI-UNIT BUILDINGS

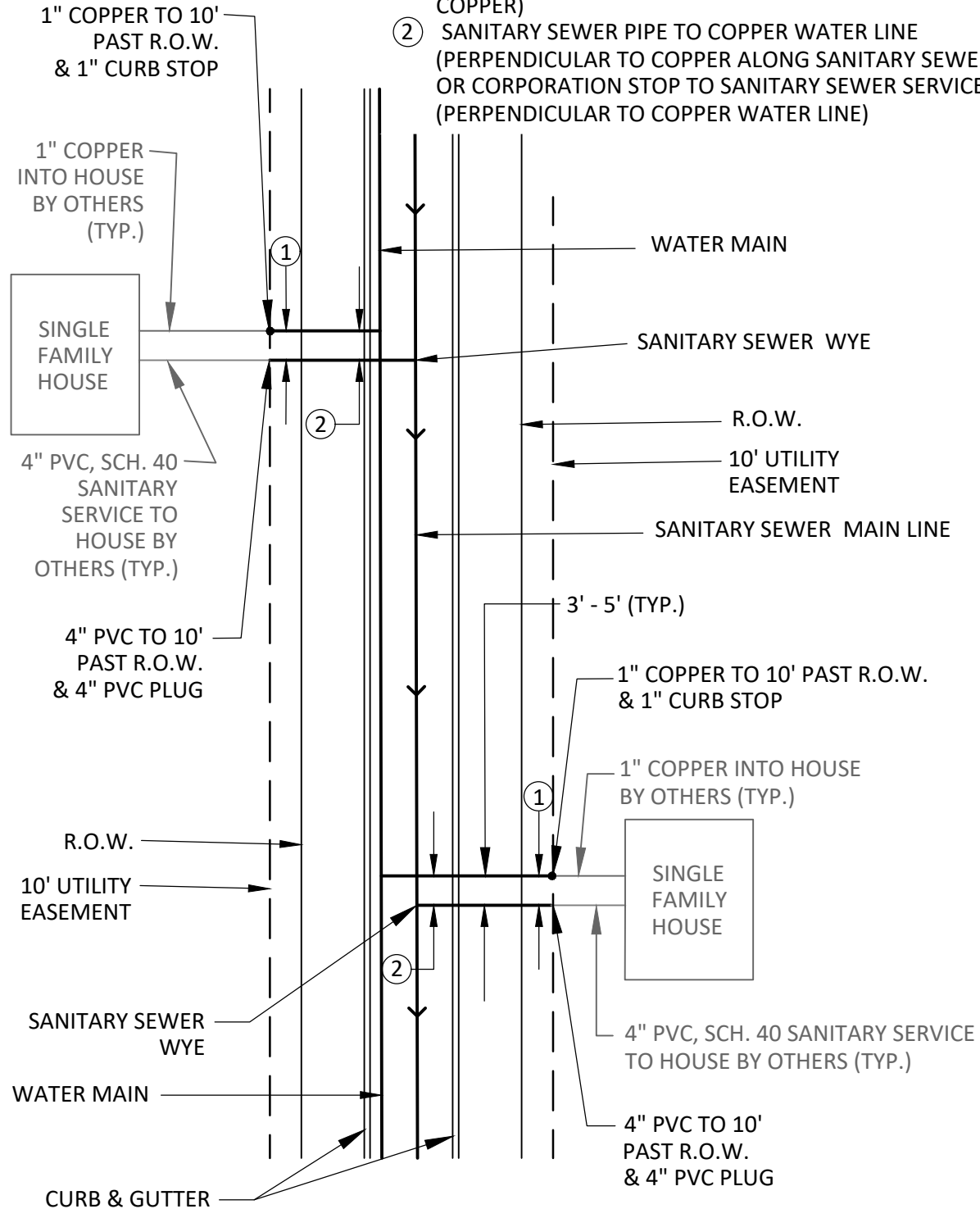
LAST REVISION:  
February 2012

PLATE NO.  
SER-9



CONTRACTOR TO PROVIDE THE FOLLOWING DIMENSIONS:

- ① CURB STOP TO SANITARY SEWER PLUG (PERPENDICULAR TO COPPER)
- ② SANITARY SEWER PIPE TO COPPER WATER LINE (PERPENDICULAR TO COPPER ALONG SANITARY SEWER MAIN) OR CORPORATION STOP TO SANITARY SEWER SERVICE LINE (PERPENDICULAR TO COPPER WATER LINE)



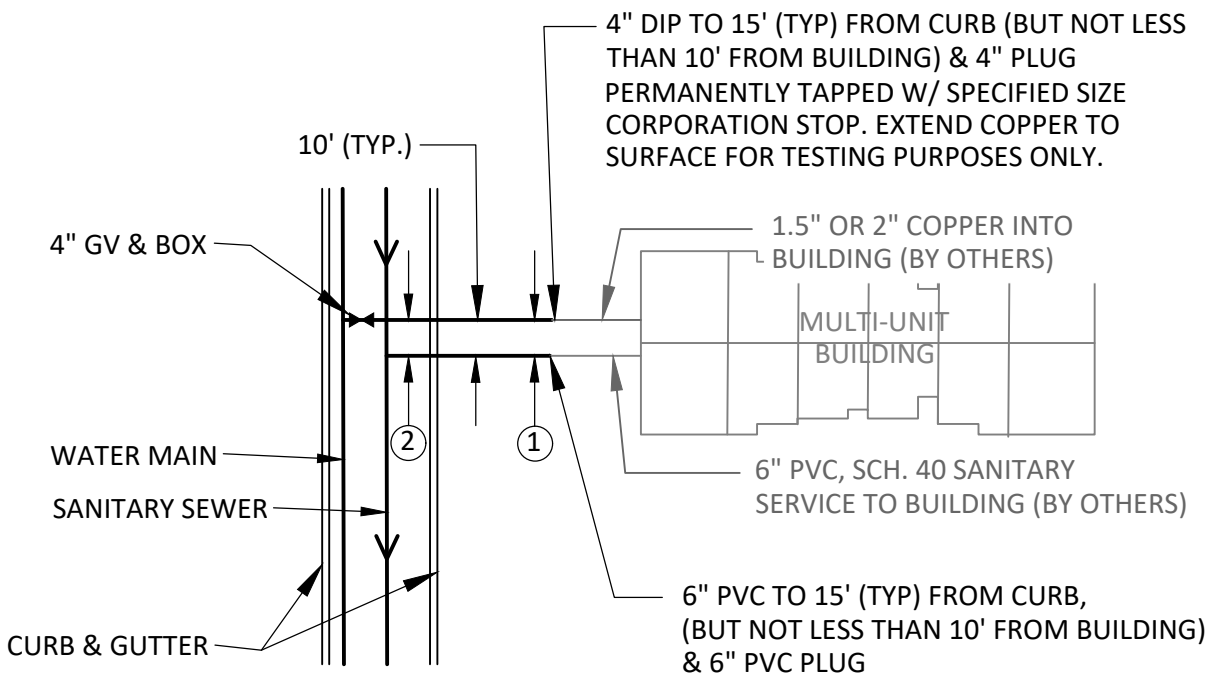
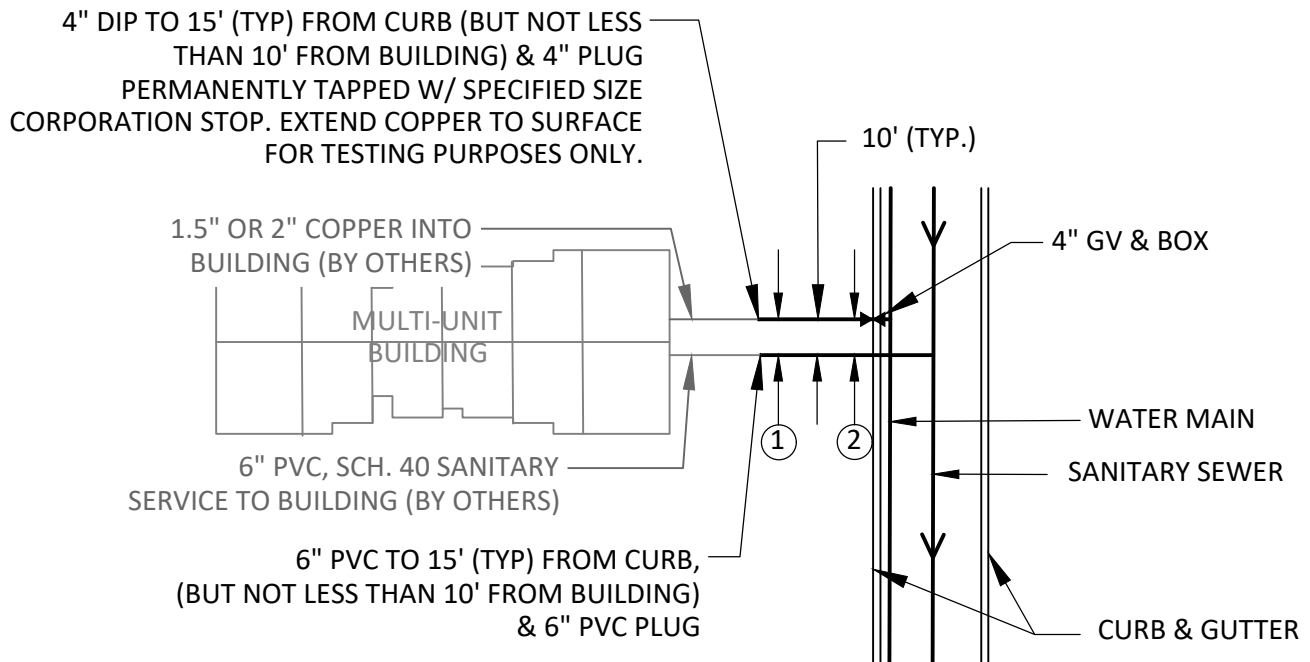
## LOCATING REQUIREMENTS FOR SINGLE FAMILY HOUSES

LAST REVISION:  
January 2018

PLATE NO.  
**SER-9A**

CONTRACTOR TO PROVIDE THE FOLLOWING DIMENSIONS:

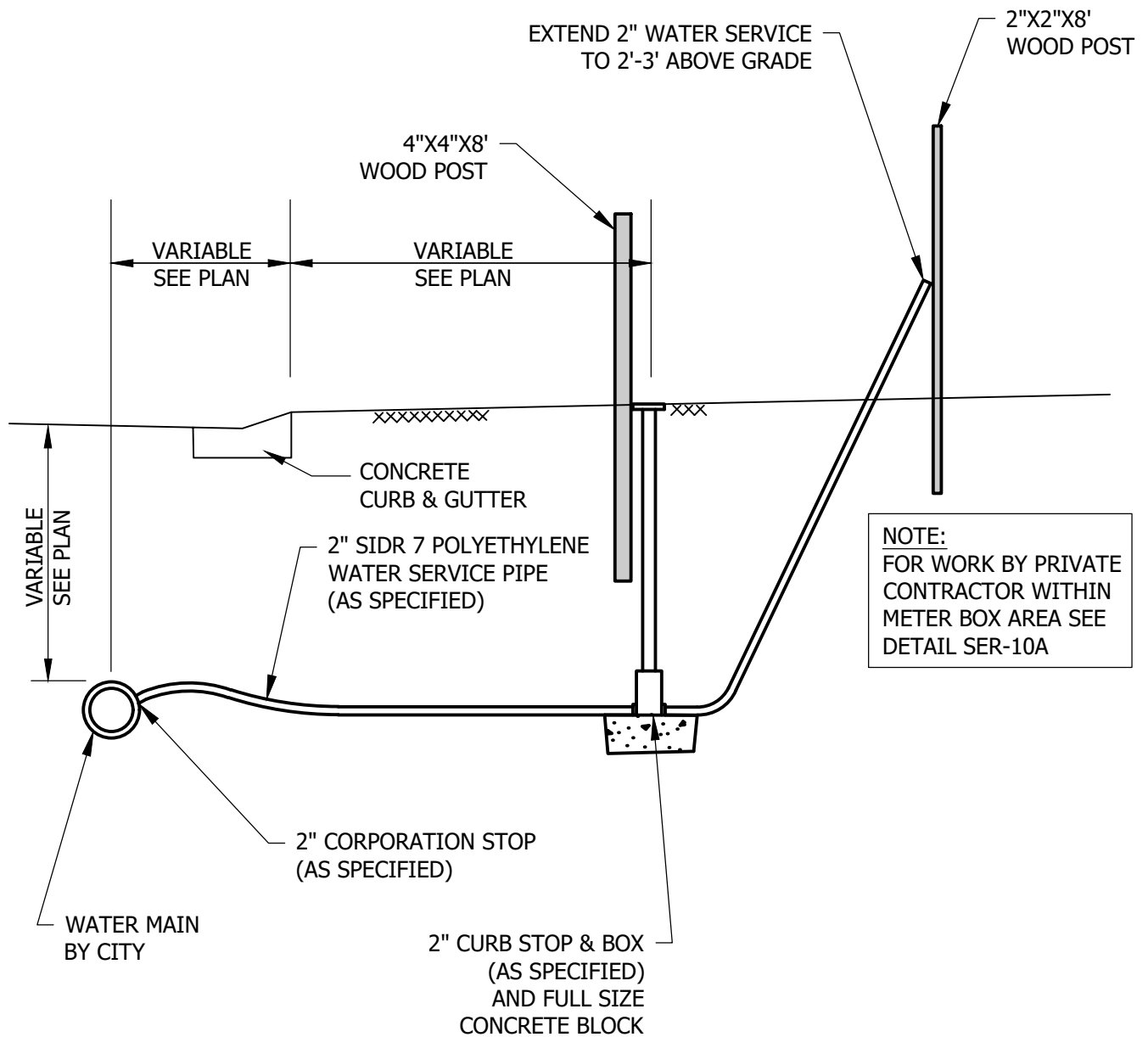
- ① WATER LINE PLUG TO SANITARY SEWER PLUG (PERPENDICULAR TO WATER LINE)
- ② SANITARY SEWER PIPE TO WATER LINE (PERPENDICULAR TO WATER LINE ALONG SANITARY SEWER MAIN) OR WATER LINE TEE TO SANITARY SEWER LINE (PERPENDICULAR TO WATER LINE)



## LOCATING REQUIREMENTS FOR MULTI-UNIT BUILDINGS

LAST REVISION:  
January 2018

PLATE NO.  
SER-9B



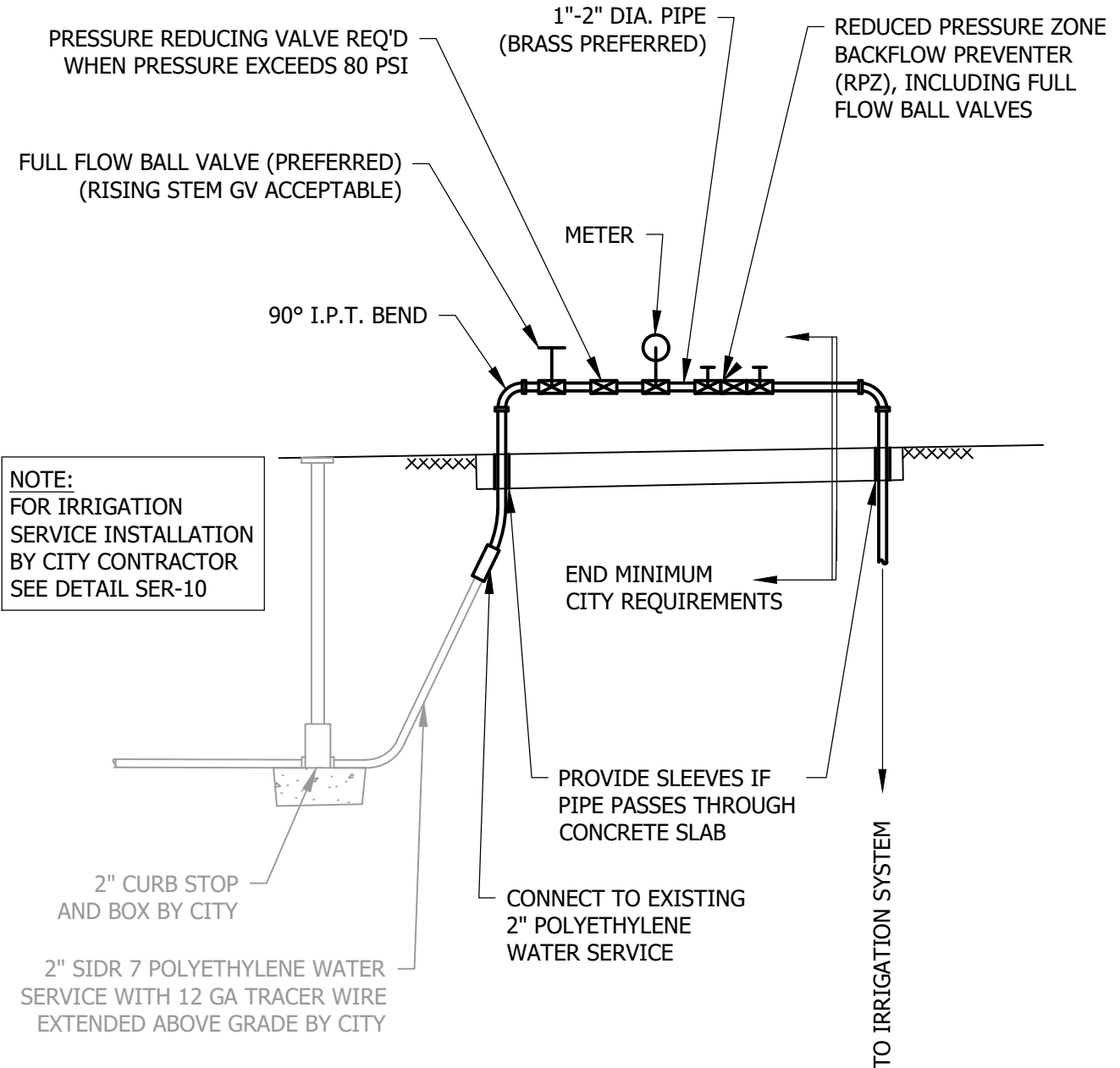
NOTE:  
INSTALL 12 GA SOLID COPPER TRACER WIRE ALONG  
ENTIRE LENGTH OF SERVICE TO END ABOVE GRADE.



## 2" POLYETHYLENE PIPE IRRIGATION SERVICE

LAST REVISION:  
May 2018

PLATE NO.  
SER-10



**NOTES:**

1. CITY WATER SERVICE & PLUMBING PERMITS REQUIRED FOR WORK BY PRIVATE CONTRACTORS.
2. ANNUAL TESTING OF RPZ REQUIRED
3. REQUIRED EQUIPMENT MUST BE ENCLOSED AND SUPPORTED.
4. 2" DIAMETER SIZE IS STANDARD. OTHER SIZES ALLOWED ONLY BY APPROVAL OF CITY.
5. SLEEVES FOR PIPES IN CONCRETE SLABS SHALL BE 4" DIAMETER PVC OR SIMILAR.
6. ATTACH TRACER WIRE TO FITTINGS INSIDE METER BOX.



**POLYETHYLENE IRRIGATION SERVICE  
BY PRIVATE CONTRACTOR**

LAST REVISION:  
May 2018

PLATE NO.  
**SER-10A**

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City  
Plate  
No.

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STR-26	TYPICAL SECTION FOR BITUMINOUS TRAIL AND CONCRETE SIDEWALK
STR-27	TYPICAL TRAFFIC SIGN INSTALLATION - BOULEVARD
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## SECTION 6 - STREETS INDEX

LAST REVISION:  
December 2019

PLATE NO.

# INDEX

City  
Plate  
No.

## SECTION 6 - STREETS

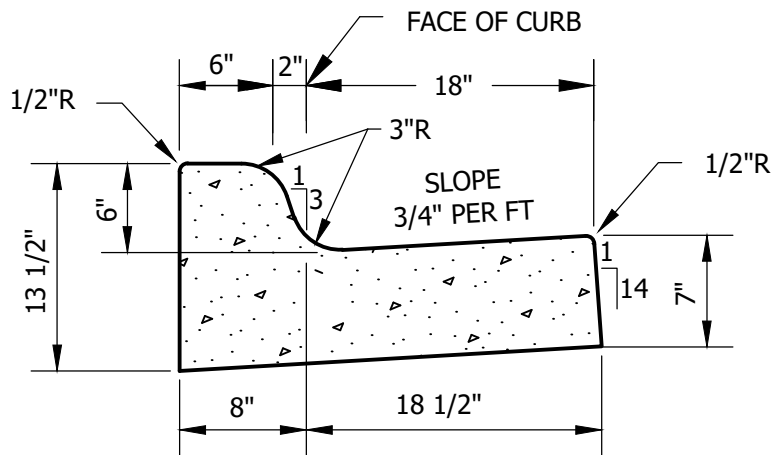
STR-32	CROSSWALK SIGNAGE DETAIL
STR-33	CONCRETE CURB PROTECTION
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STR-41	HIGH CAPACITY CONCRETE APRON (B618 CURB)
STR-42	CITY PROPERTY MONUMENT
STR-43	RURAL ROADWAY DRIVEWAY CULVERT



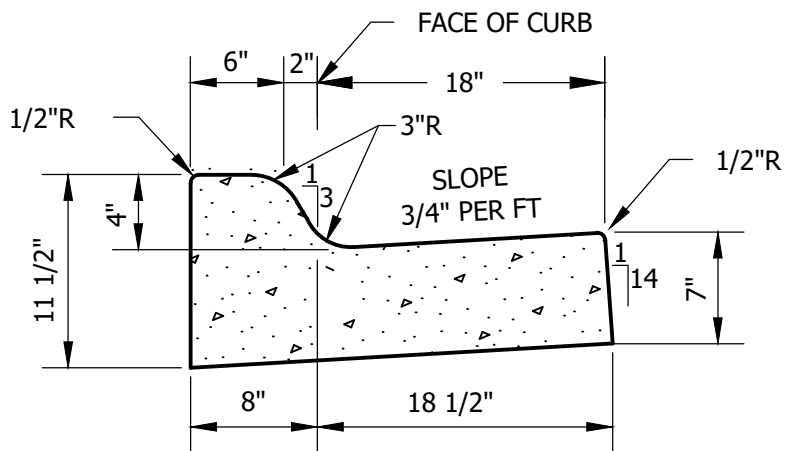
## SECTION 6 - STREETS INDEX

LAST REVISION:  
December 2019

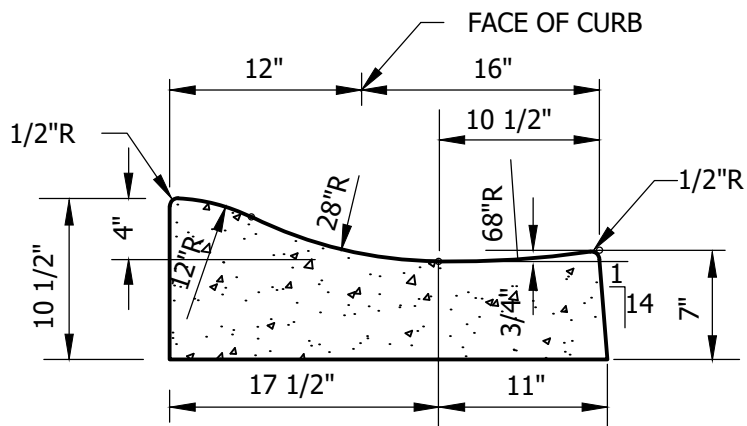
PLATE NO.



MODIFIED  
MNDOT B618



MODIFIED  
MNDOT B418



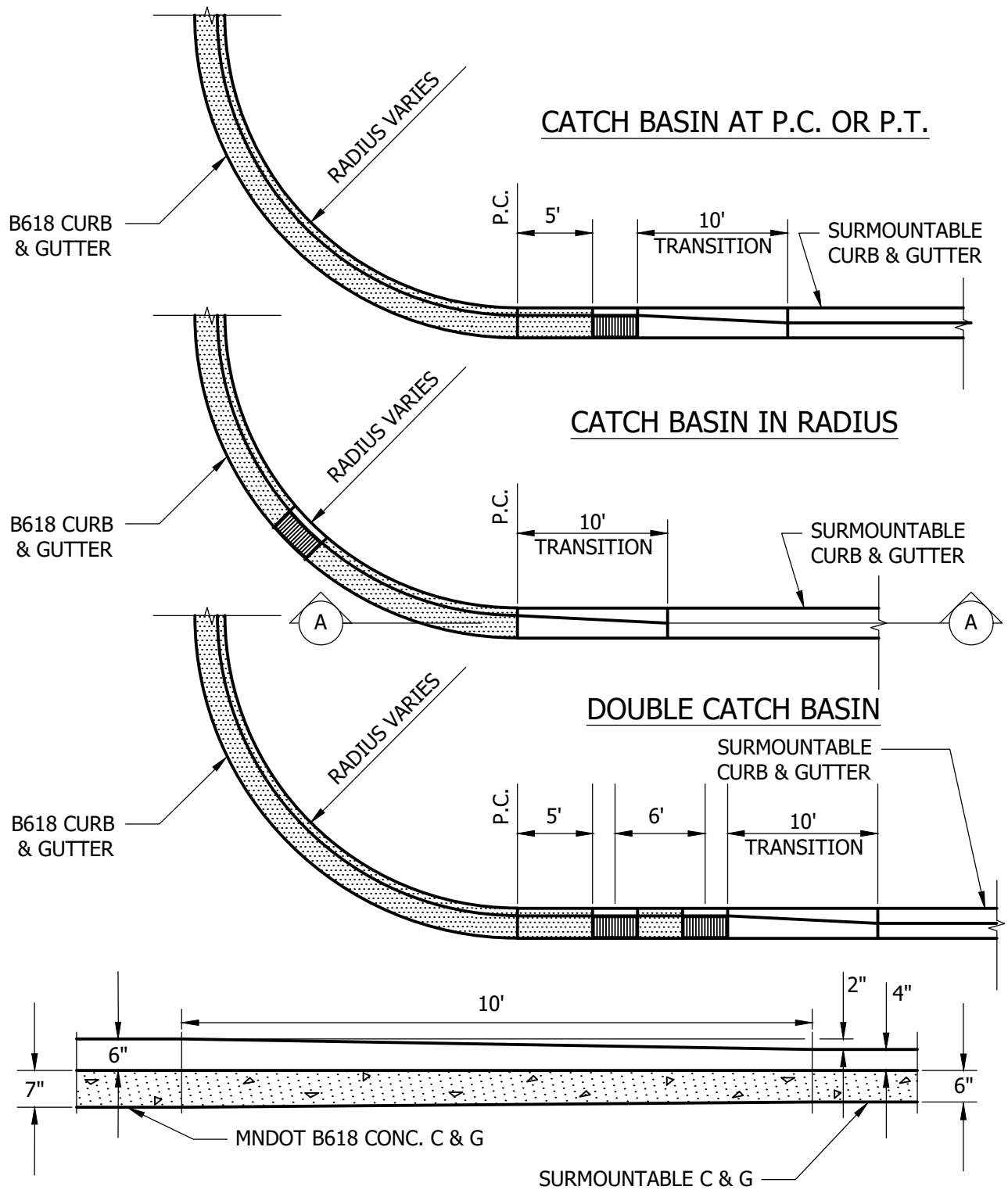
SURMOUNTABLE  
D428 MODIFIED



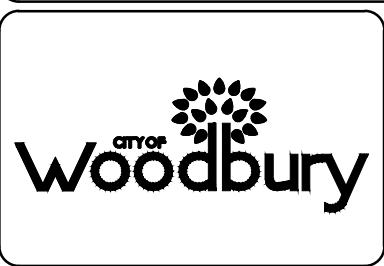
## CURB AND GUTTER

LAST REVISION:  
January 2018

PLATE NO.  
STR-1



SECTION A-A



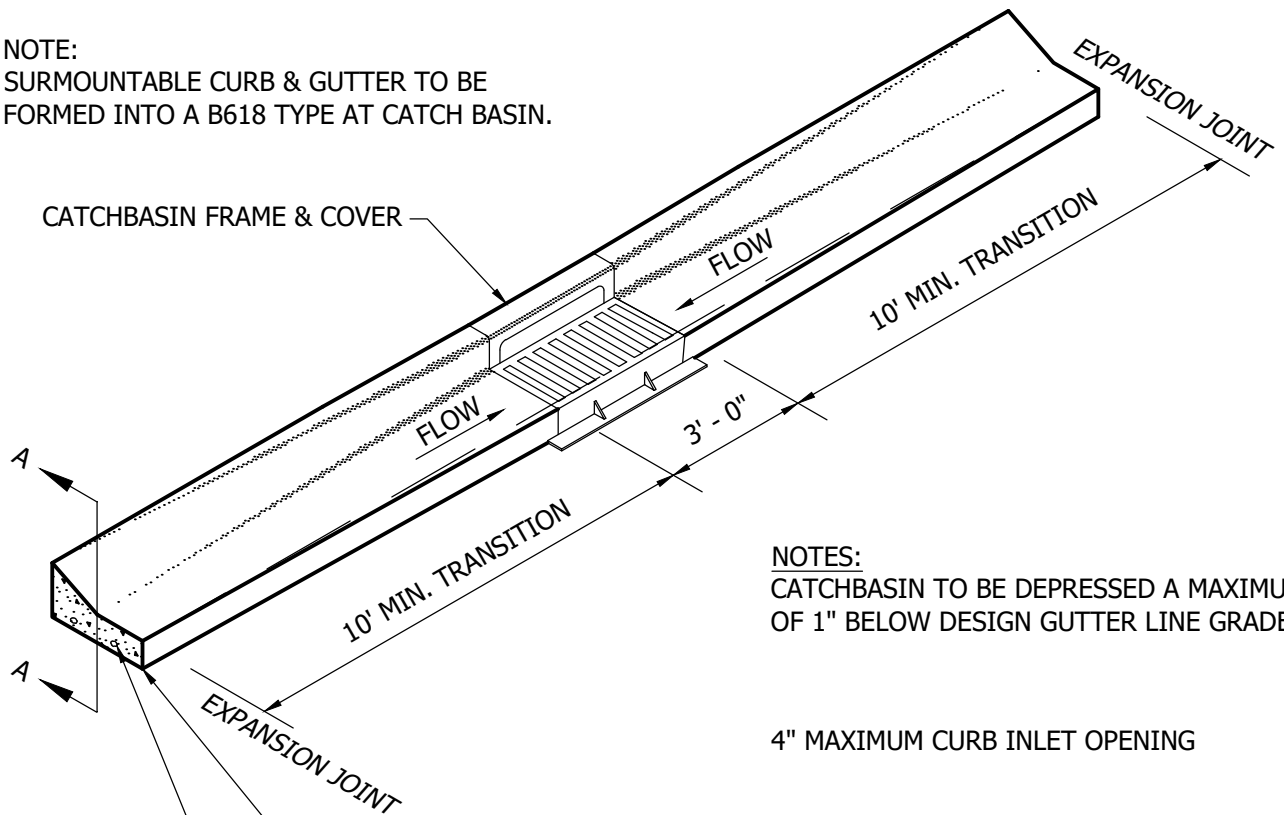
CONCRETE CURB & GUTTER  
TRANSITIONS

LAST REVISION:  
April 2010

PLATE NO.  
STR-2



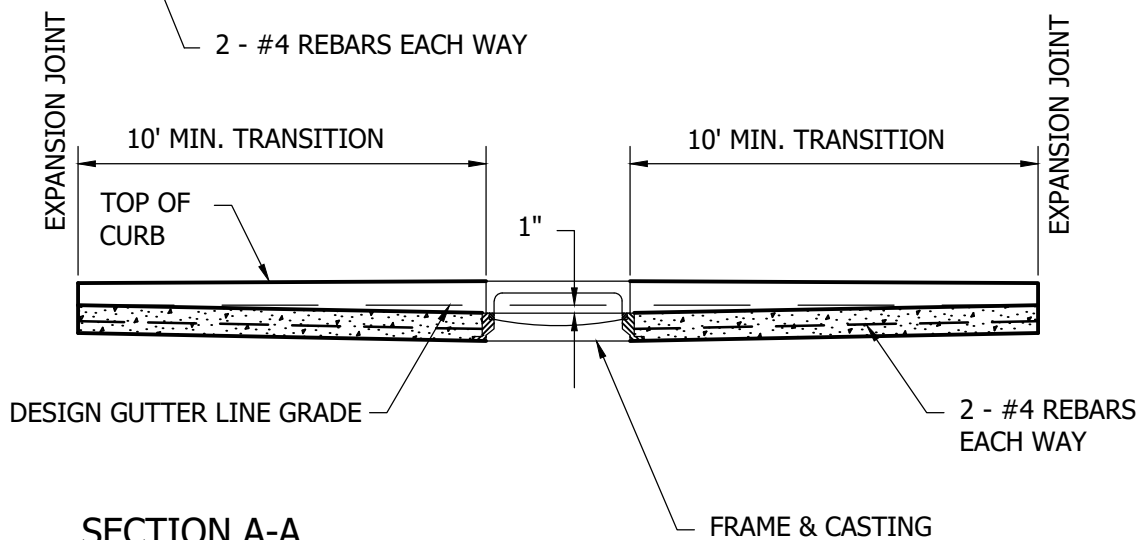
NOTE:  
SURMOUNTABLE CURB & GUTTER TO BE  
FORMED INTO A B618 TYPE AT CATCH BASIN.



NOTES:  
CATCHBASIN TO BE DEPRESSED A MAXIMUM  
OF 1" BELOW DESIGN GUTTER LINE GRADE.

ISOMETRIC

NO SCALE



SECTION A-A

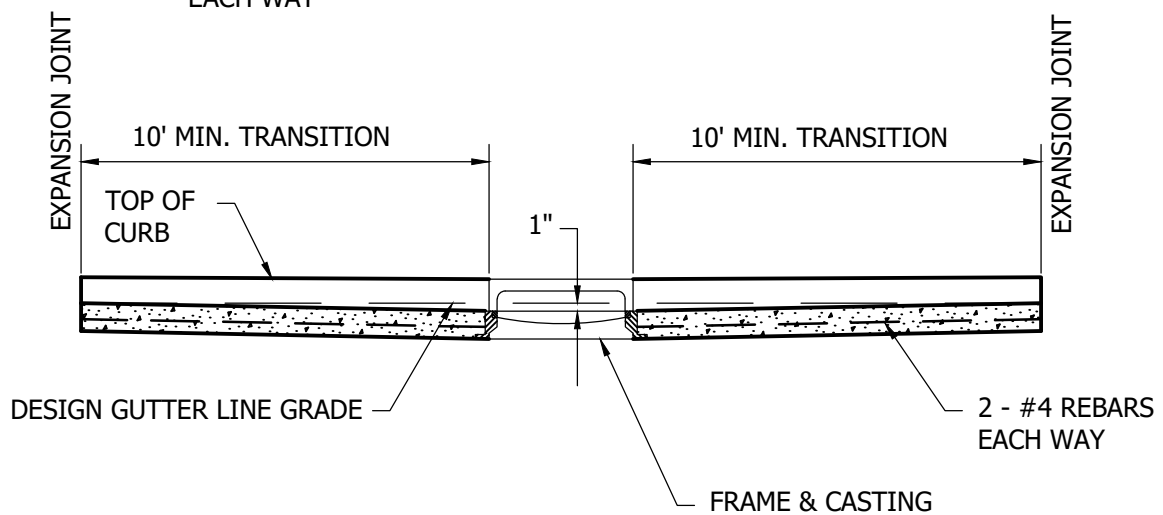
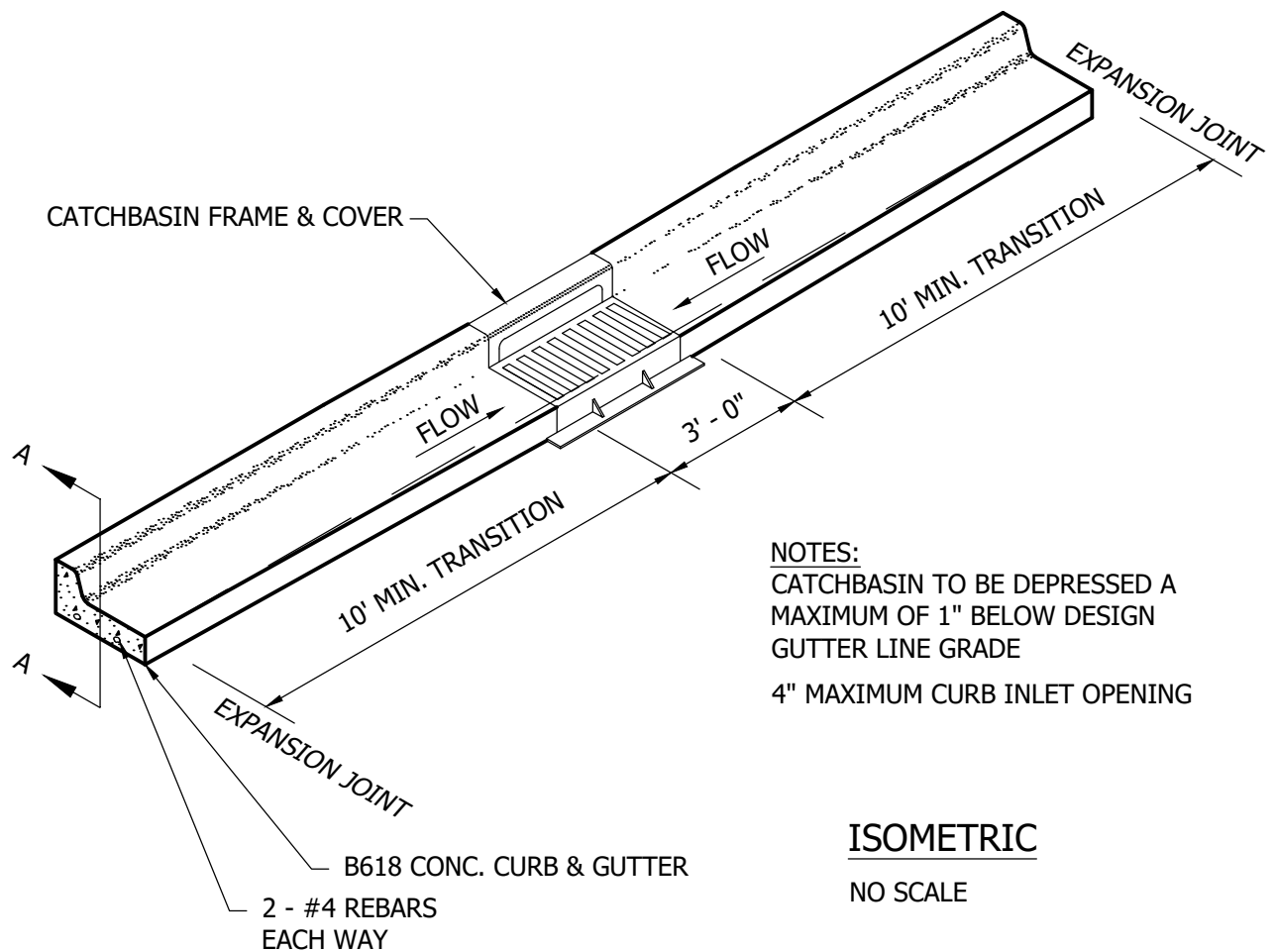
NO SCALE



SURMOUNTABLE CURB & GUTTER  
CONSTRUCTION AT CATCH BASIN

LAST REVISION:  
December 2020

PLATE NO.  
STR-3



### SECTION A-A

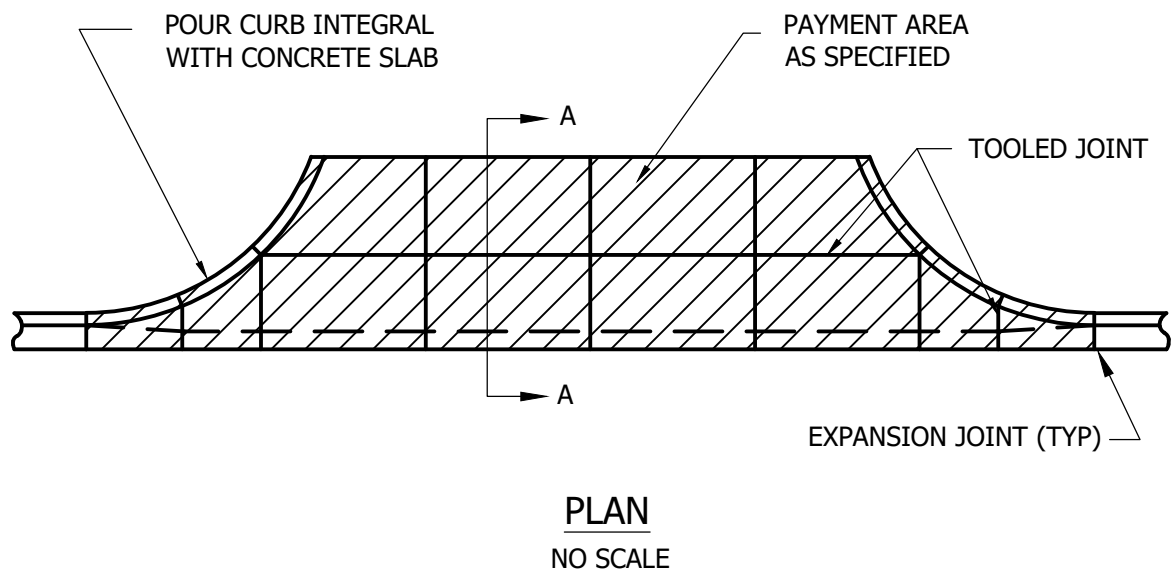
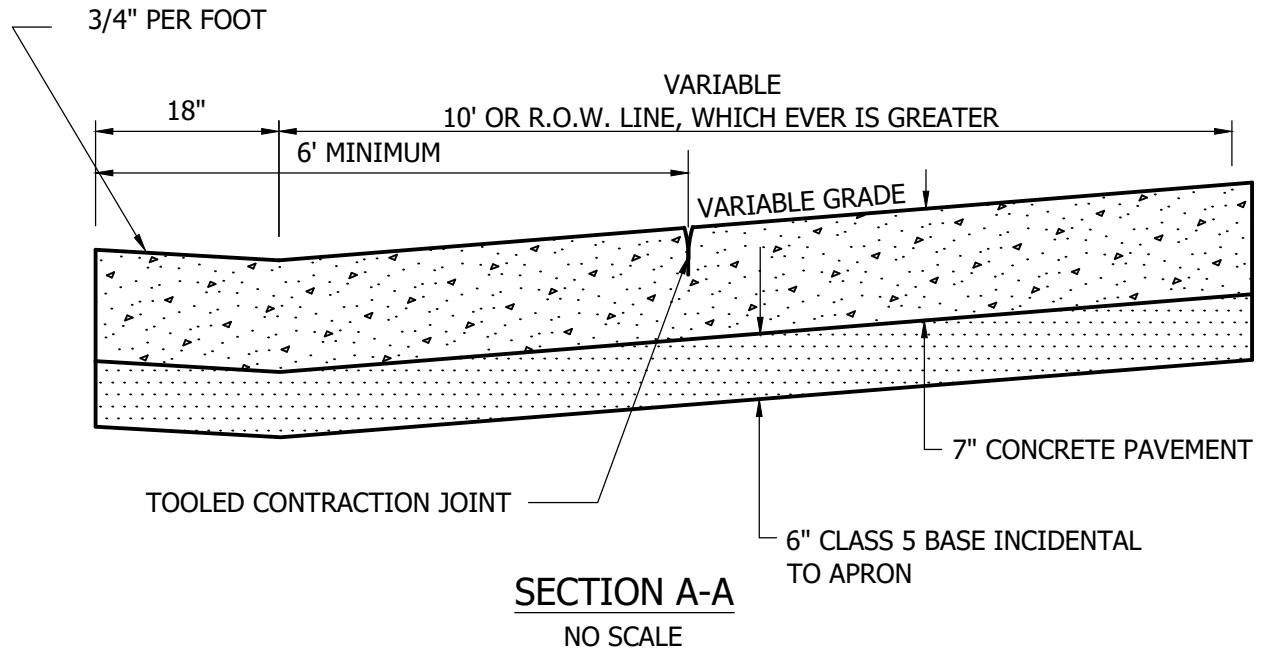
NO SCALE



## B618 CURB & GUTTER CONSTRUCTION AT CATCH BASIN

LAST REVISION:  
December 2020

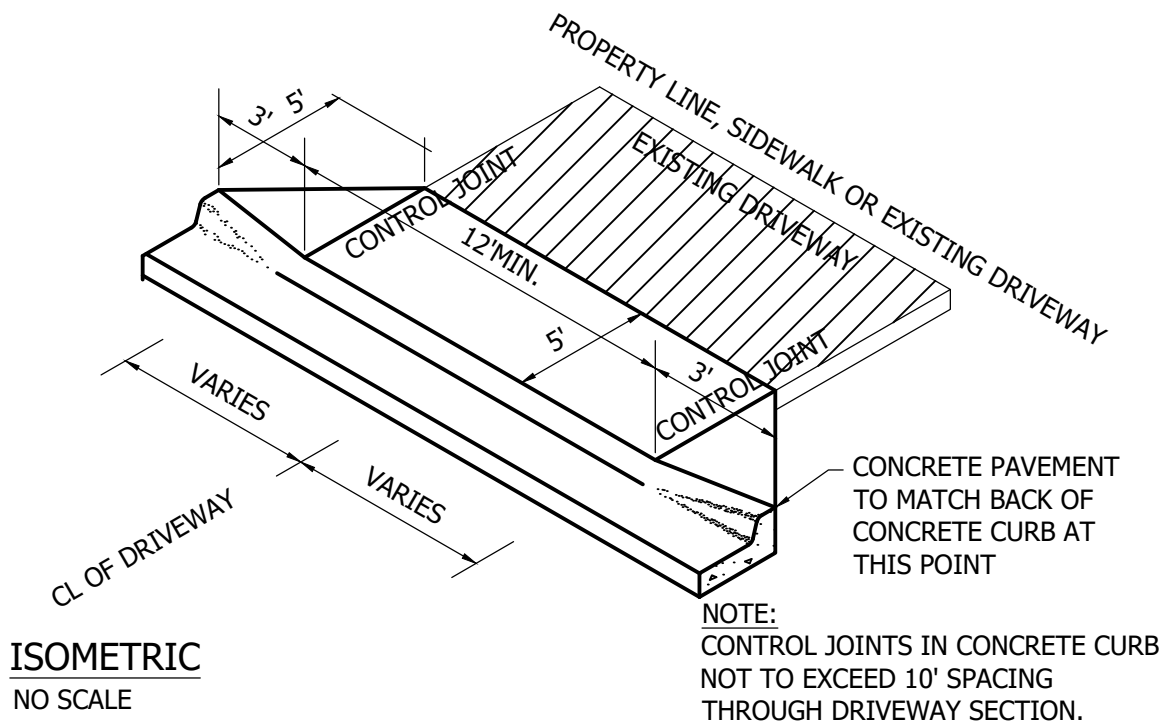
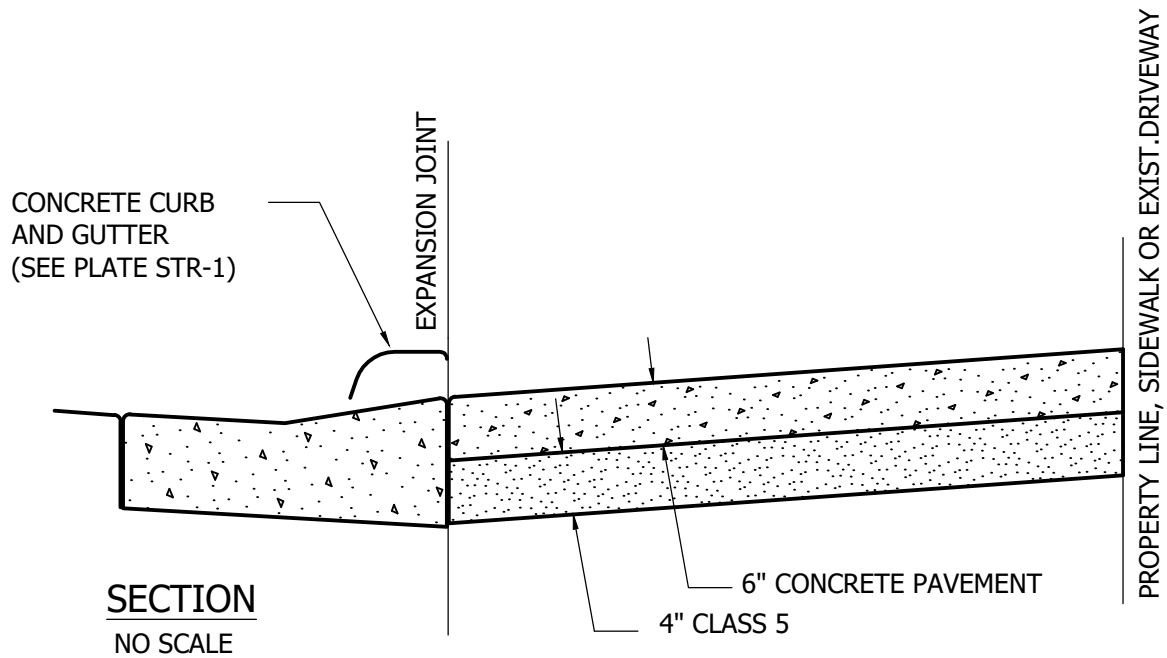
PLATE NO.  
STR-4



## CONCRETE DRIVEWAY APRON COMMERCIAL

LAST REVISION:  
December 2019

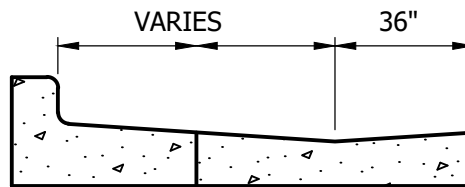
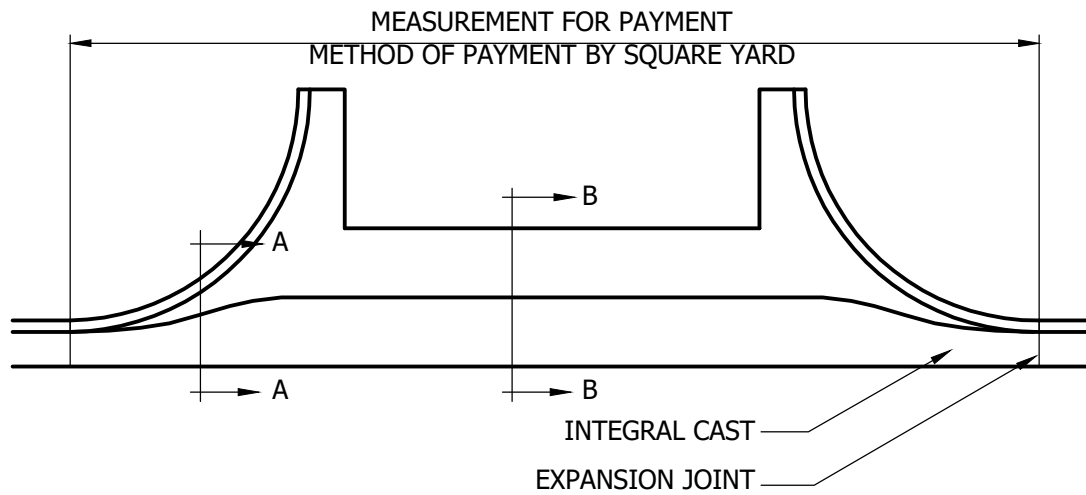
PLATE NO.  
**STR-8**



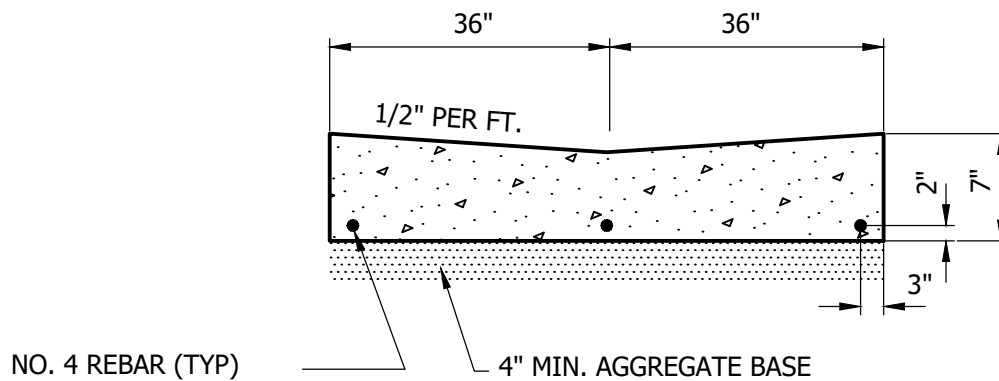
## CONCRETE DRIVEWAY APRON - RESIDENTIAL

LAST REVISION:  
March 2008

PLATE NO.  
**STR-9**



SECTION A-A THRU  
B618 C & G



SECTION B-B  
THRU CONCRETE GUTTER

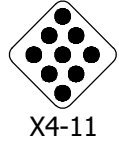


CONCRETE VALLEY GUTTER

LAST REVISION:  
November 2019

PLATE NO.  
**STR-10**

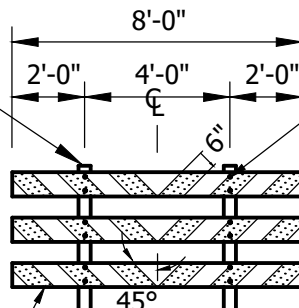
ADD "END OF ROAD MARKER"  
(OM4-2 RED ON BLACK)



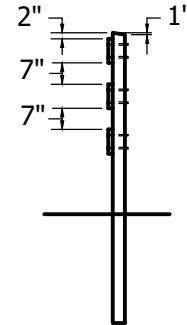
MOUNT ABOVE TOP  
PANEL ON POST

EX. GROUND

NOMINAL  
1"X8"X8'-0"



1/2"X6" GALVANIZED BOLTS  
WITH CUT WASHERS  
(CARRIAGE, HEX. OR SQ.)



8' STEEL  
CHANNEL POSTS  
WITH STANDARD  
WEIGHT OF  
3 LBS/FT

#### NOTES:

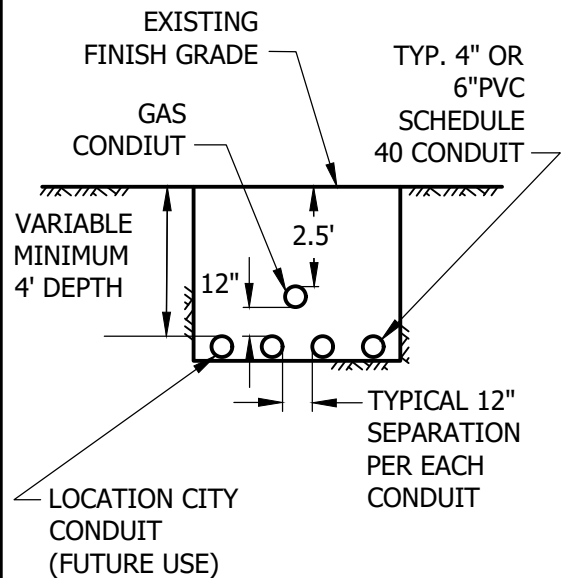
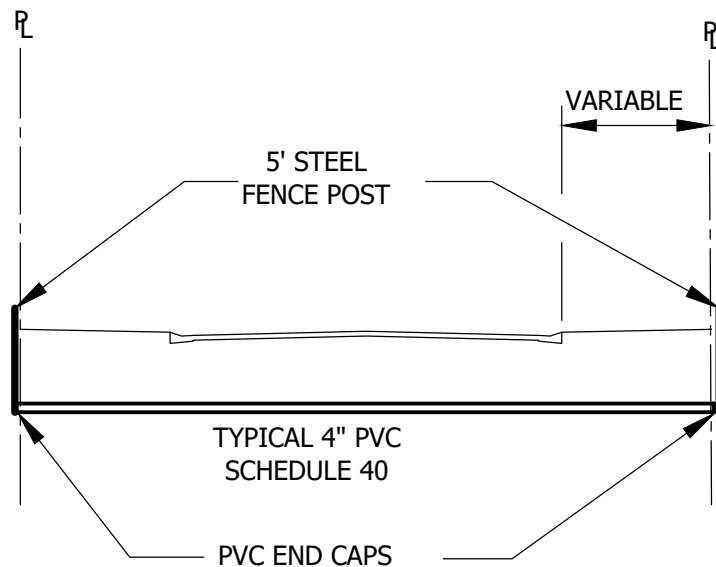
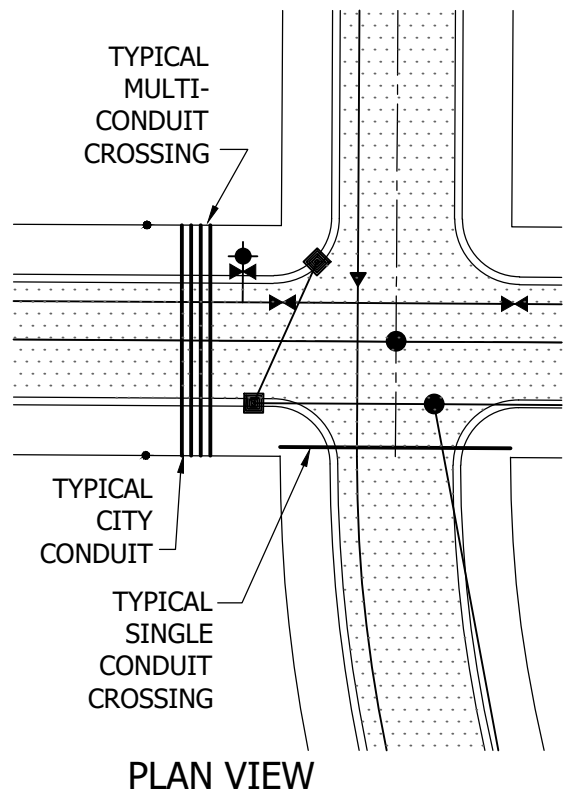
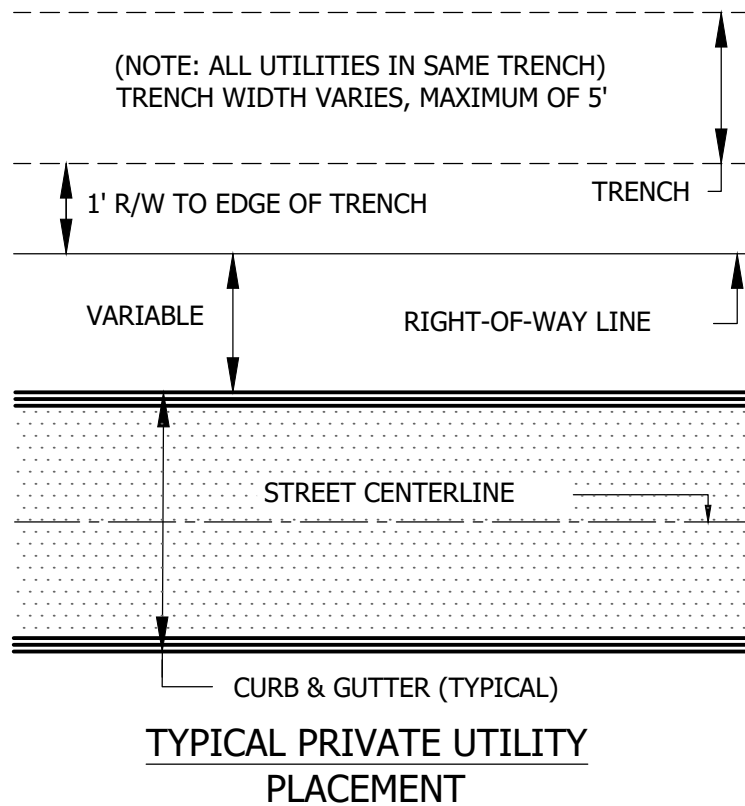
1. THE PLACEMENT OF THE BARRICADE SHALL BE 10'-0" FROM THE END OF THE BITUMINOUS ROAD WITH THE BARRICADE CENTERED ON THE ROADWAY FACING THE FLOW OF TRAFFIC. BARRICADES SHALL BE PLACED WITH MAXIMUM 6' SPACING AND SHALL SPAN ENTIRE ROADWAY WIDTH.
2. ONLY ONE "END OF ROAD MARKER" REQUIRED PER STREET.



PERMANENT BARRICADE

LAST REVISION:  
February 2012

PLATE NO.  
**STR-11**

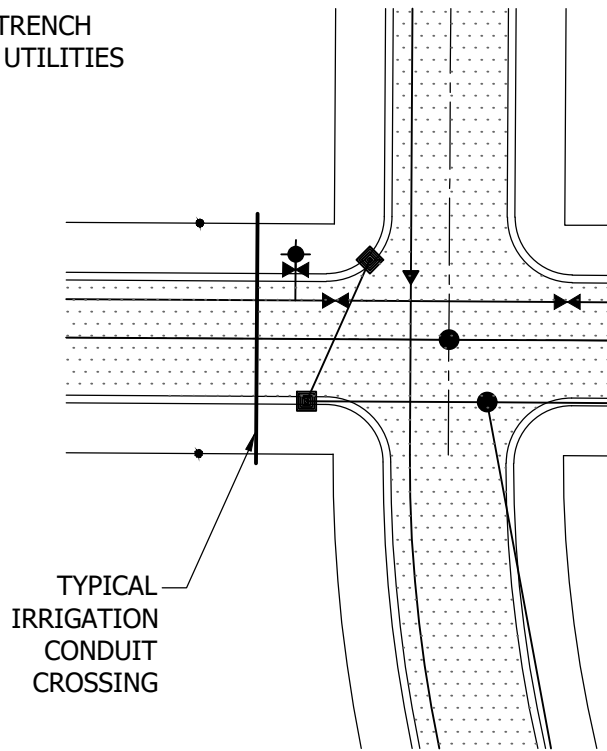


## PRIVATE UTILITY CONDUIT CROSSING

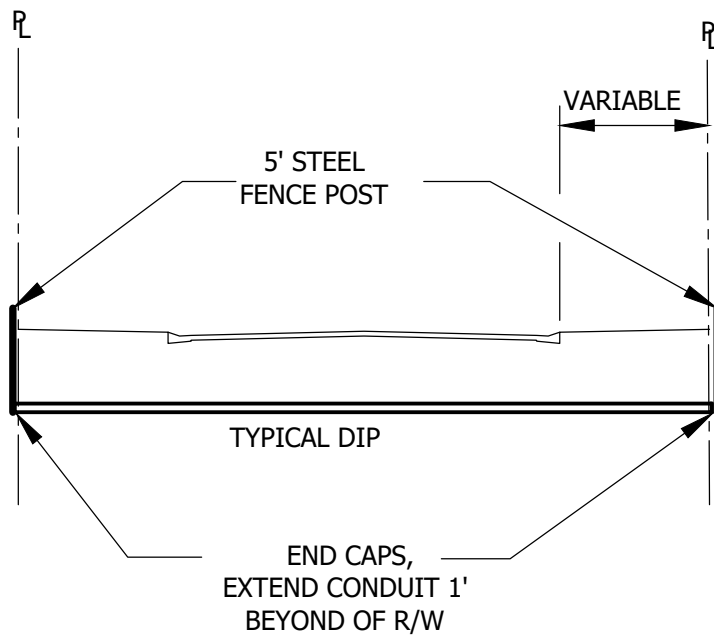
LAST REVISION:  
Sept. 2002

PLATE NO.  
**STR-12**

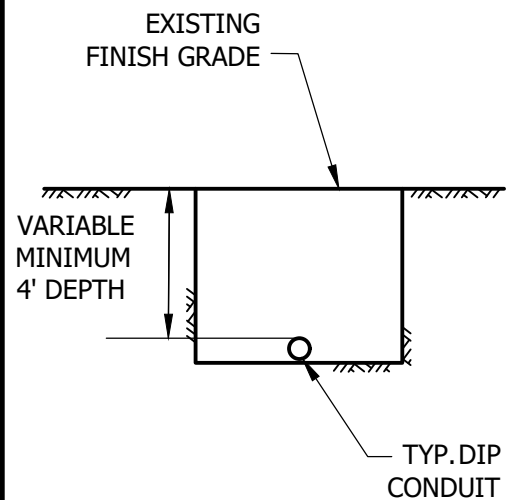
NOTE: IRRIGATION CONDUIT TRENCH  
SEPARATE FROM ALL PRIVATE UTILITIES



PLAN VIEW



CROSS SECTION



TRENCH CROSS SECTION  
AT CONDUIT CROSSING

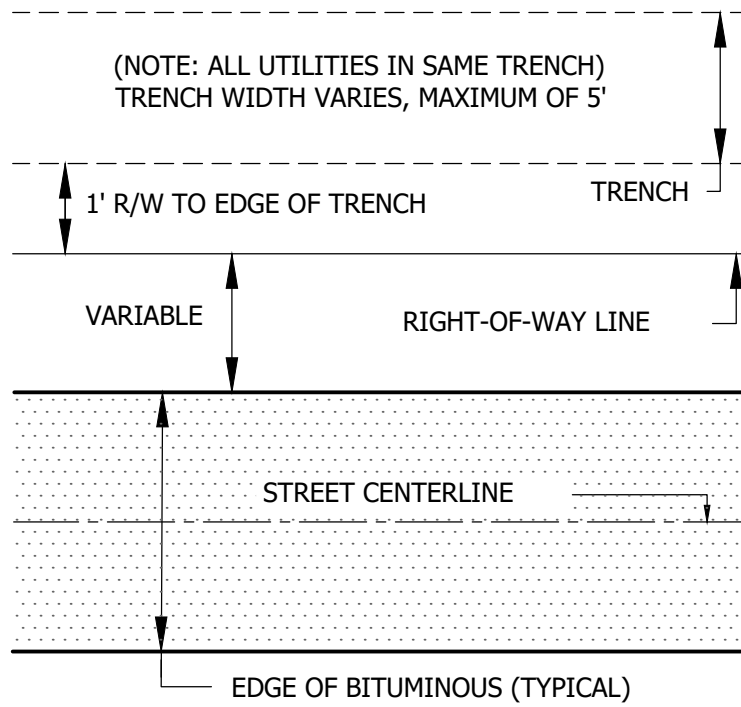


DIP IRRIGATION  
CONDUIT CROSSING

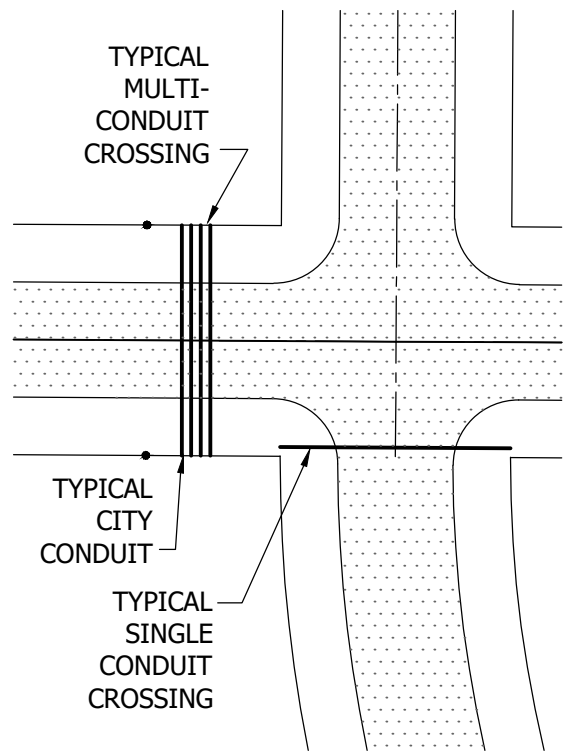
LAST REVISION:  
December 2016

PLATE NO.  
**STR-12A**

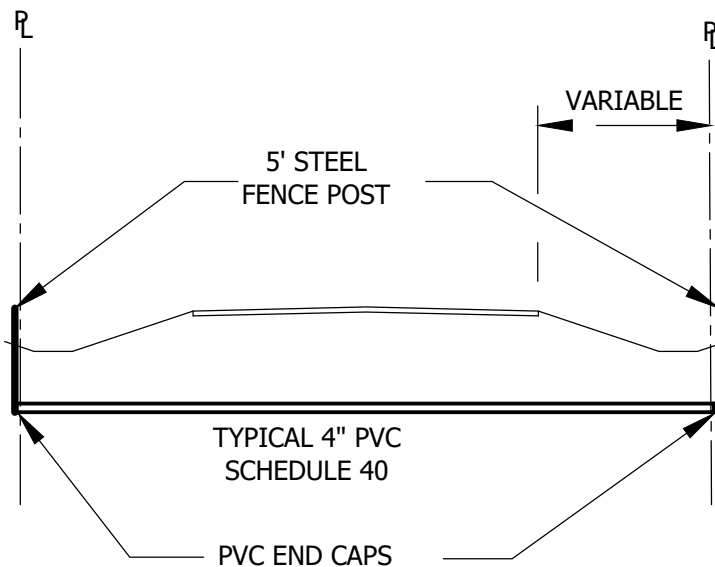




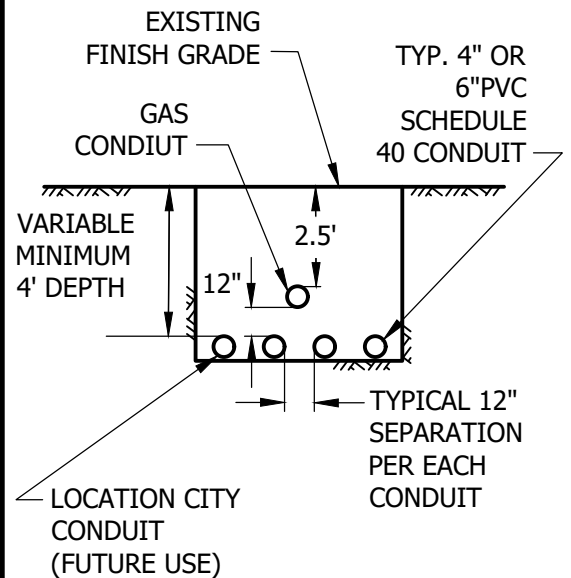
TYPICAL PRIVATE UTILITY  
PLACEMENT



PLAN VIEW



CROSS SECTION



TRENCH CROSS SECTION  
AT CONDUIT CROSSING



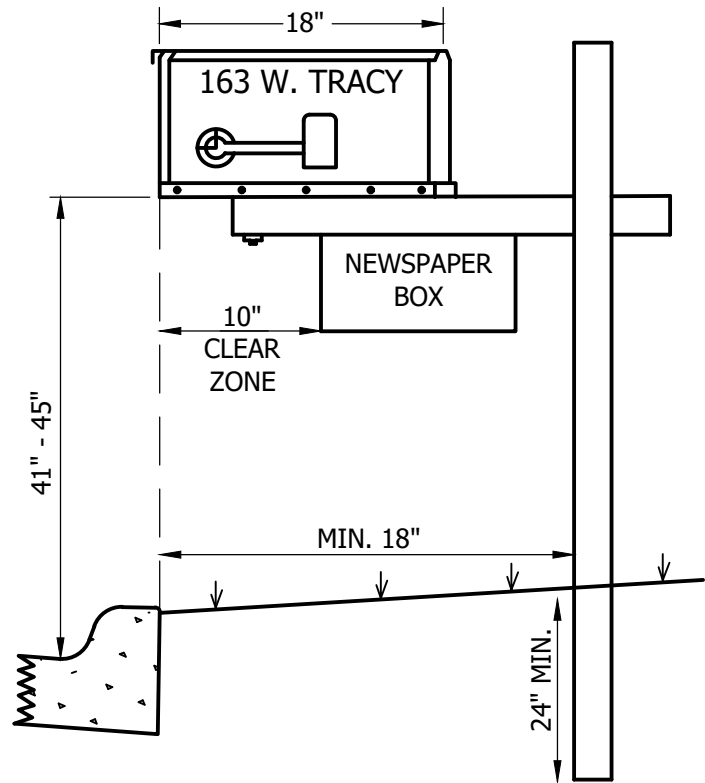
PRIVATE UTILITY  
CONDUIT CROSSING  
RURAL SECTION

LAST REVISION:  
January 2019

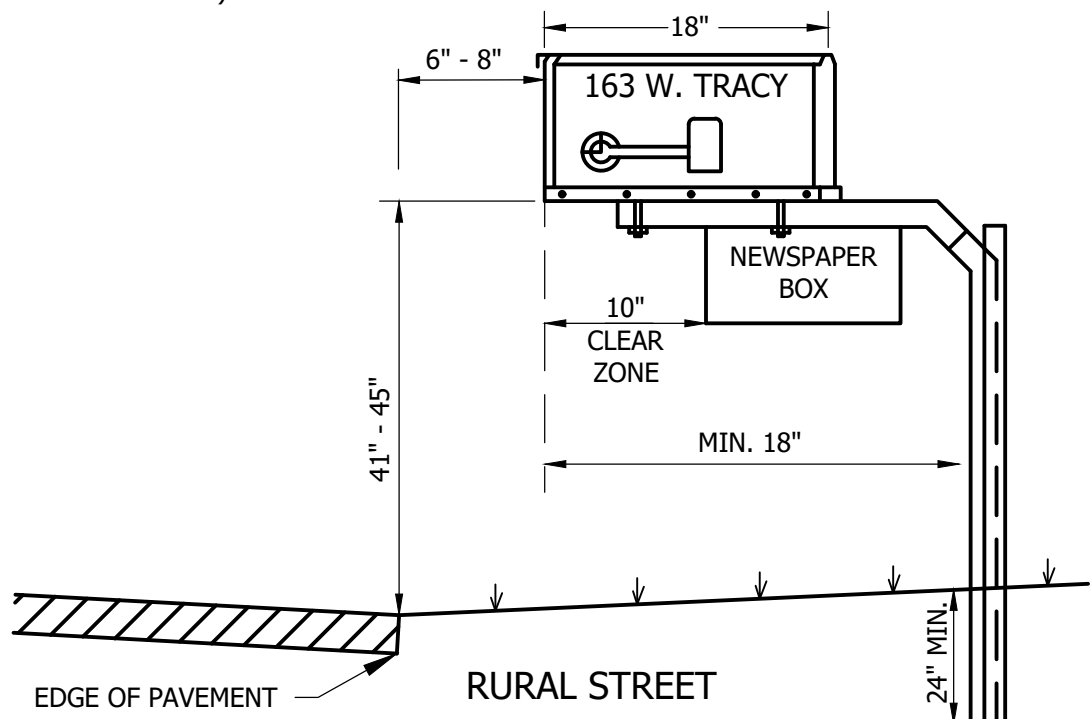
PLATE NO.  
STR-12B

NOTES:  
DIMENSIONS AS PER U.S. POSTAL  
SERVICE

ADDRESS MUST BE ON SIDE OF  
BOX FROM WHICH CARRIER  
APPROACHES IN LETTERS ABOUT  
ONE INCH HIGH (OR ON FRONT  
WHERE BOXES ARE GROUPED).



URBAN STREET



EDGE OF PAVEMENT

RURAL STREET

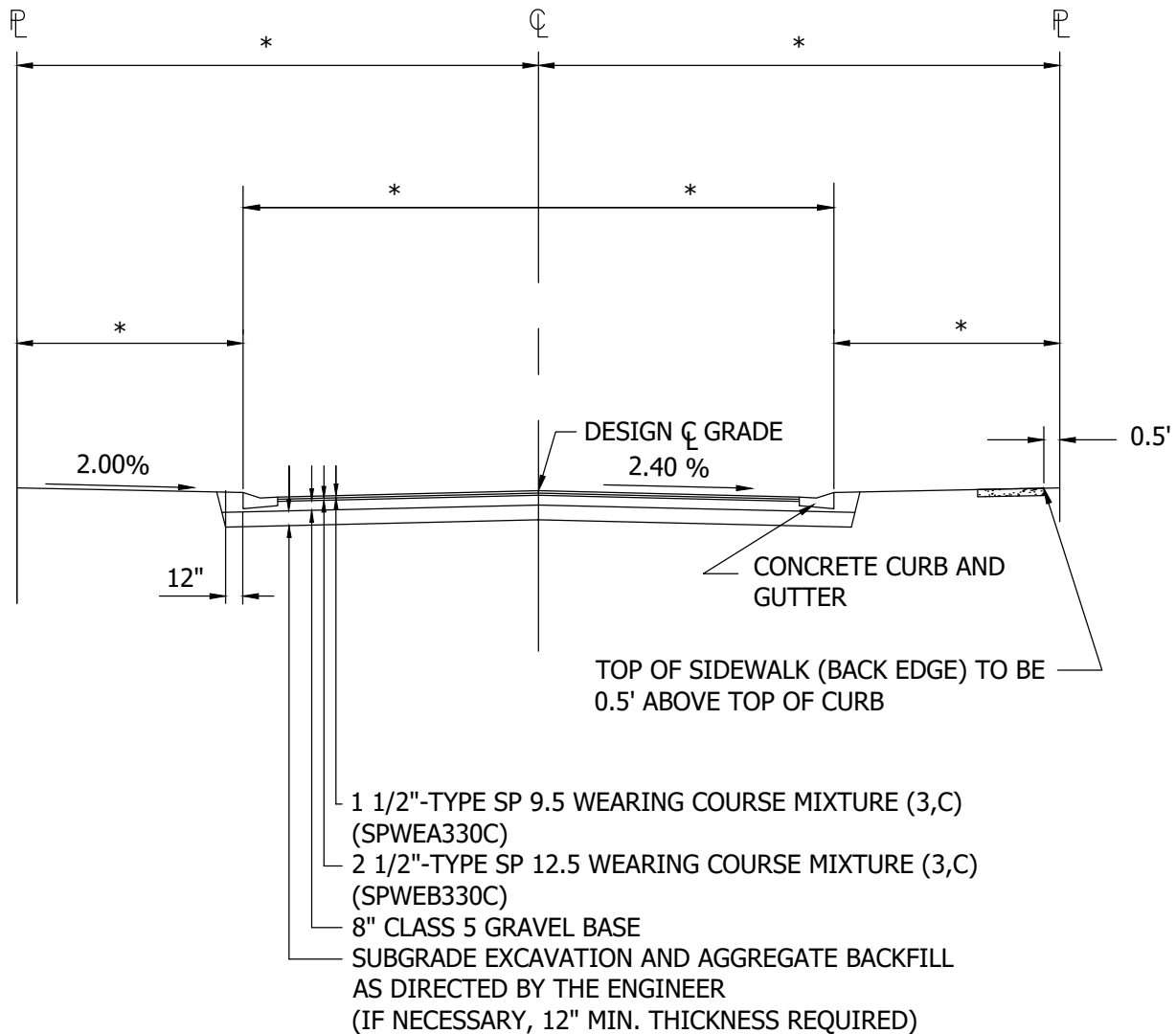


## MAIL BOX INSTALLATION

LAST REVISION:  
November 2019

PLATE NO.  
STR-13

\* SEE STREET LAYOUT STANDARD DETAIL PLATES



- NOTES:
- A. TYPICAL SECTION SHOWN IS MINIMUM RESIDENTIAL STREET REQUIREMENT. SEE SPECIFICATIONS FOR PROJECT SPECIFIC DETAILS.
  - B. ALL INTERSECTION RADII ARE 15' TO FACE OF CURB UNLESS NOTED OTHERWISE.

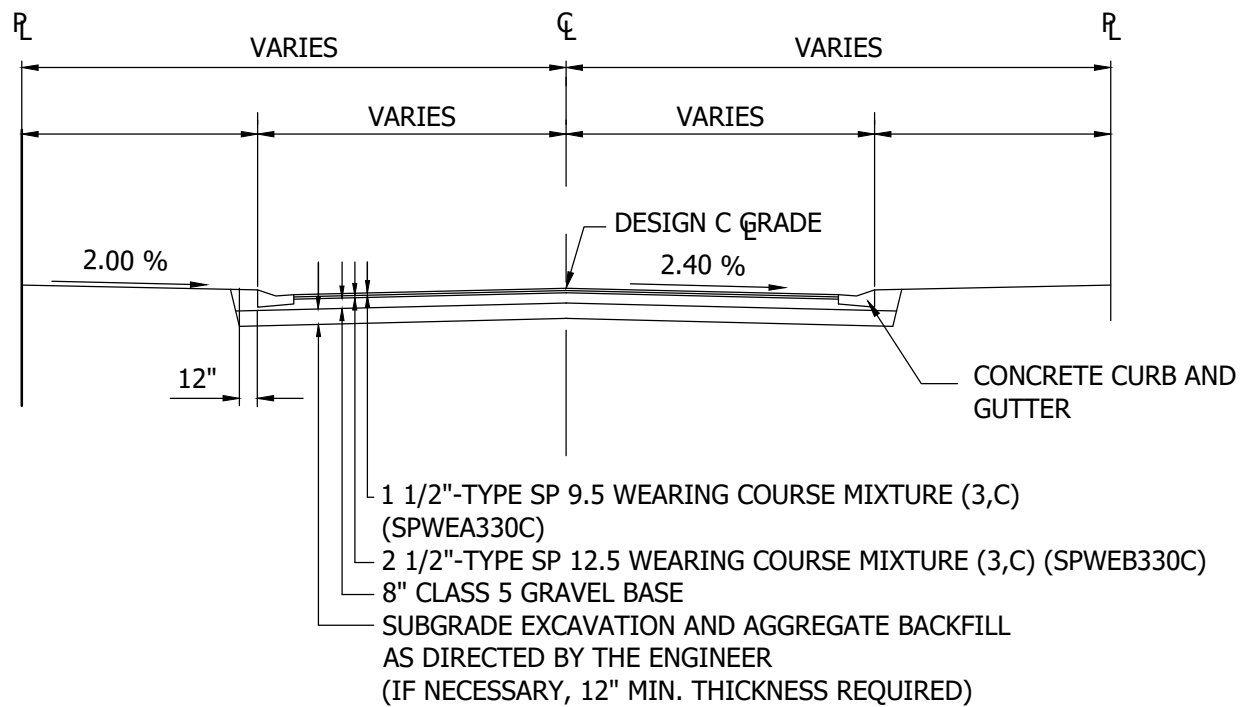


## TYPICAL RESIDENTIAL STREET SECTION

LAST REVISION:  
February 2015

PLATE NO.  
**STR-14**

\* SEE STREET TYPICAL DETAIL PLATES



NOTE: 1. TYPICAL SECTION SHOWN IS MINIMUM RESIDENTIAL STREET REQUIREMENT. SEE SPECIFICATIONS FOR PROJECT SPECIFIC DETAILS.



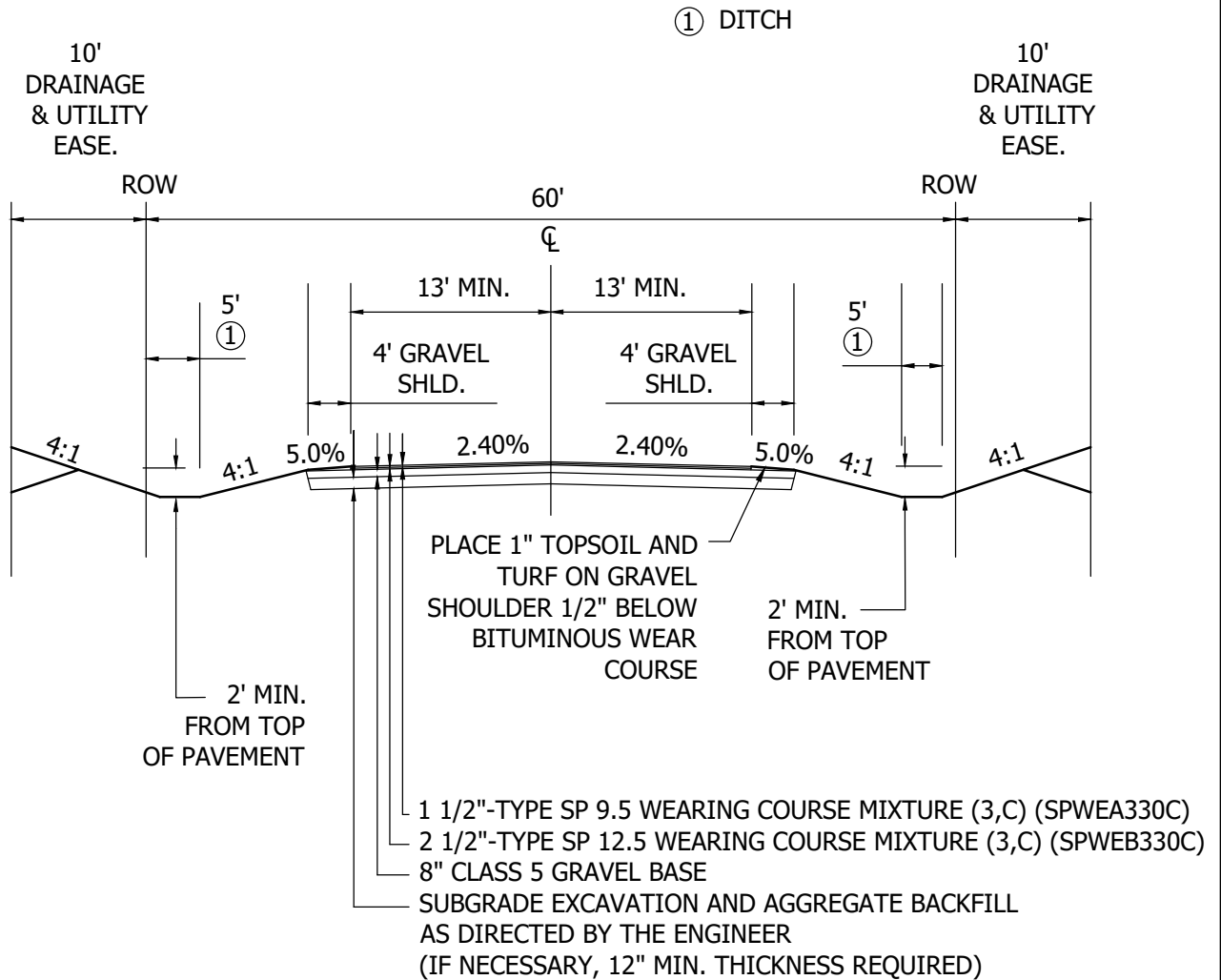
## TYPICAL PRIVATE STREET SECTION

LAST REVISION:  
February 2015

PLATE NO.  
**STR-15**

#### NOTES/RECOMMENDATIONS

1. SEE STANDARD CITY DETAIL PLATE FOR STREET TYPICAL SECTIONS.
2. 7 TON ROAD DESIGN
3. DRIVEWAY CULVERTS SHALL BE MINIMUM 18", 30' LENGTH WITH APRONS  
(HOMEOWNER RESPONSIBLE FOR CULVERT MAINTINANCE, UNLESS PART OF CITY'S DRAINAGE SYSTEM).



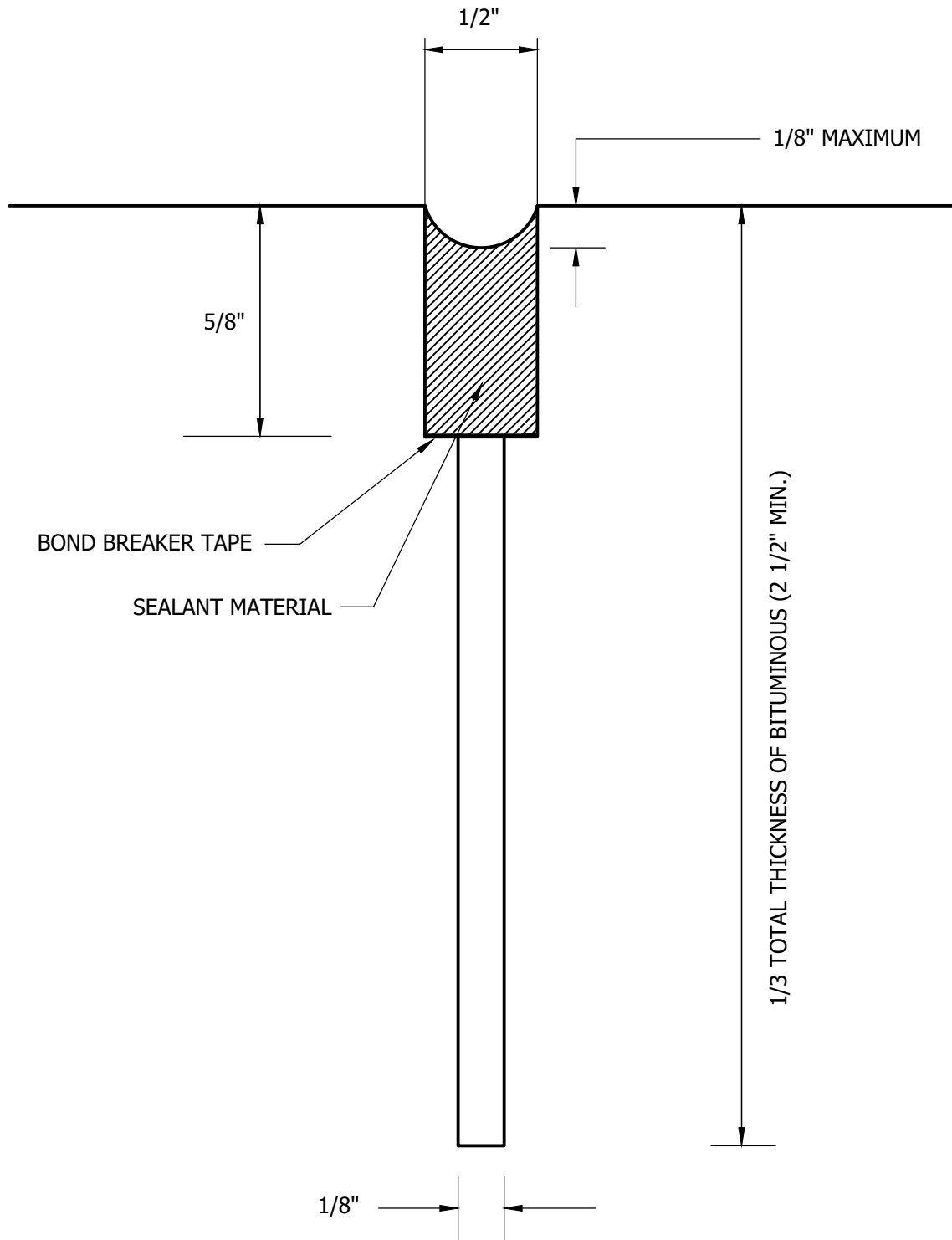
#### RURAL ESTATE RESIDENTIAL STREET



#### TYPICAL RESIDENTIAL STREET SECTION RURAL ESTATE

LAST REVISION:  
February 2015

PLATE NO.  
STR-15A



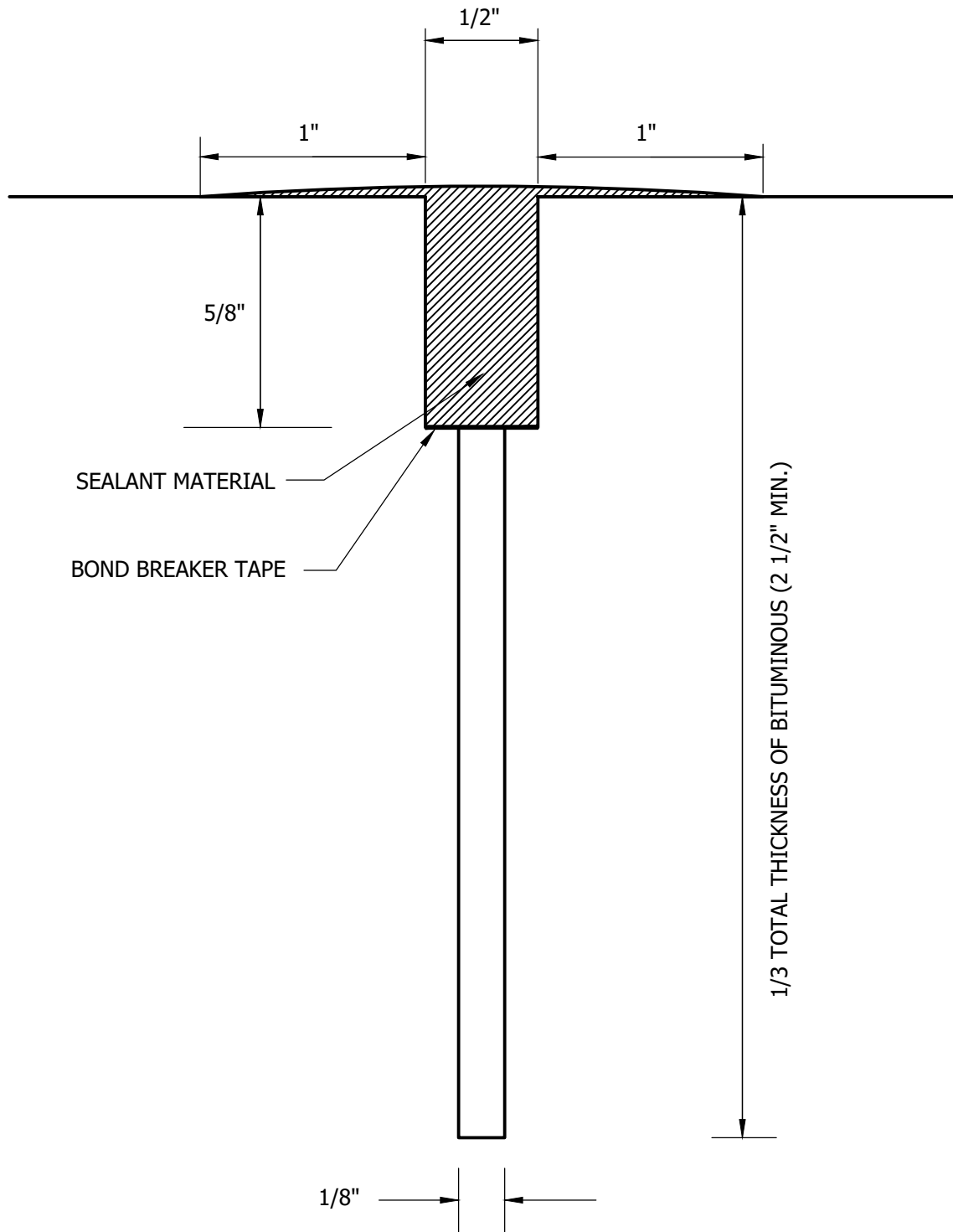
TYPICAL JOINT SECTION



BITUMINOUS JOINT SAW AND SEAL

LAST REVISION:  
March 2008

PLATE NO.  
**STR-16**



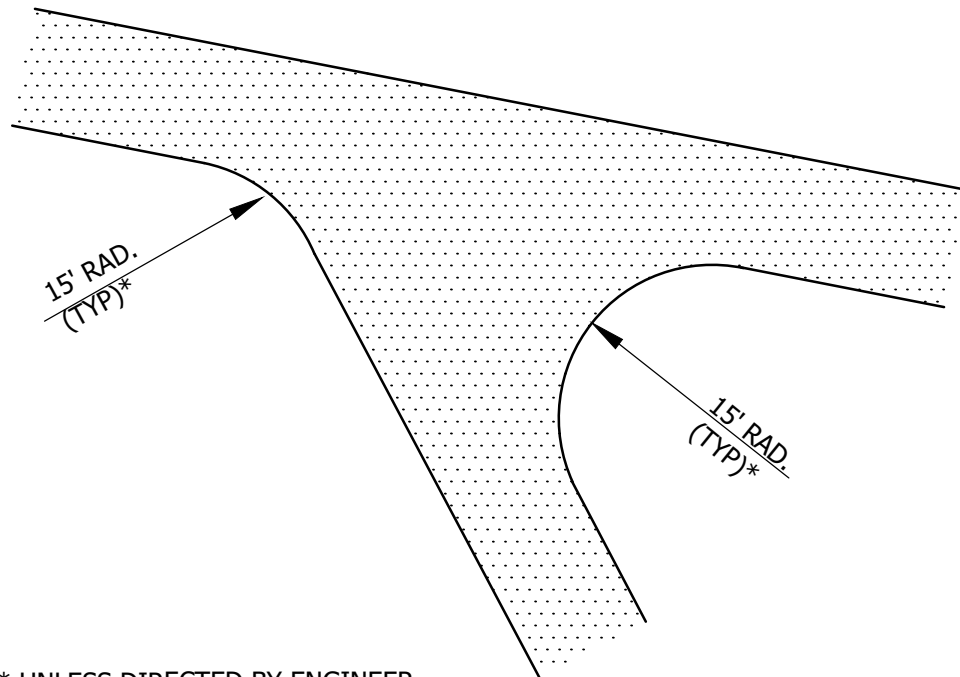
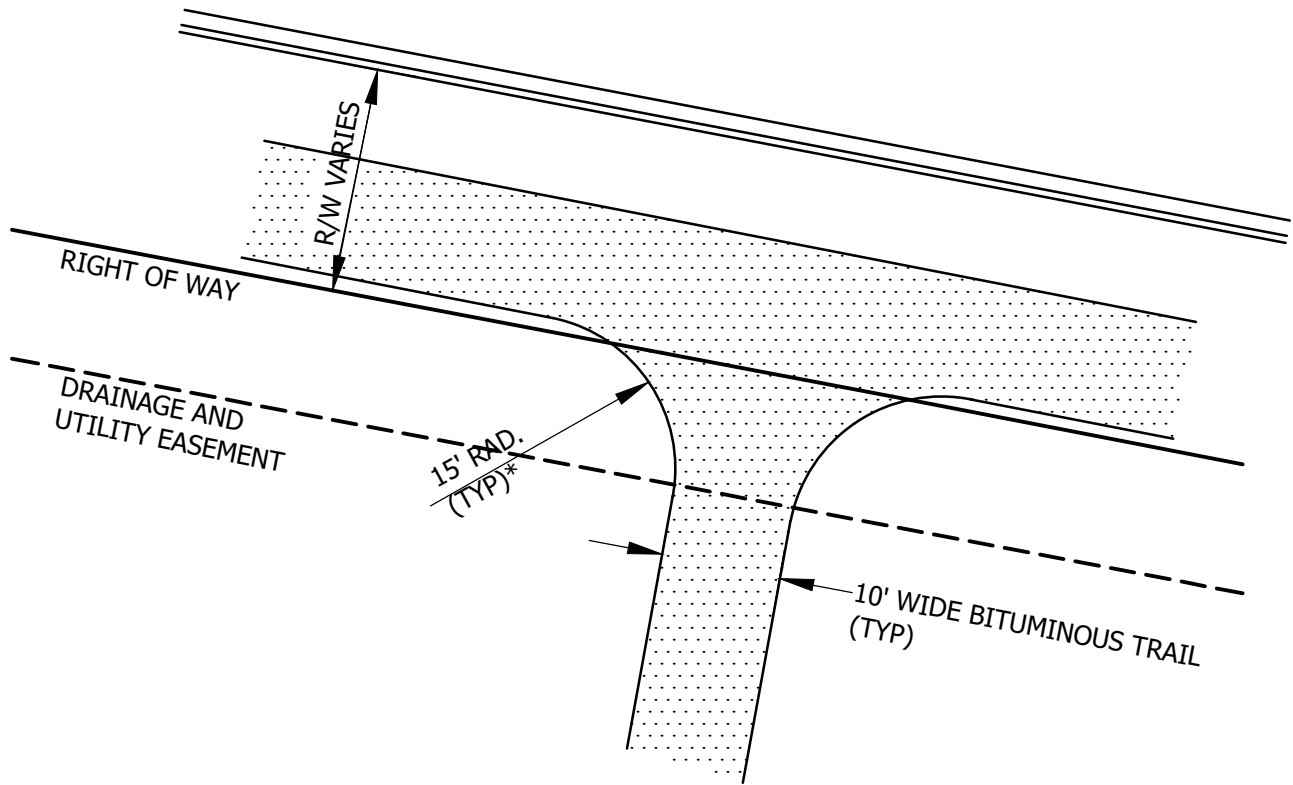
TYPICAL JOINT SECTION



BITUMINOUS JOINT SAW AND SEAL  
WITH OVER BAND

LAST REVISION:  
June 2011

PLATE NO.  
STR-16A



\* UNLESS DIRECTED BY ENGINEER

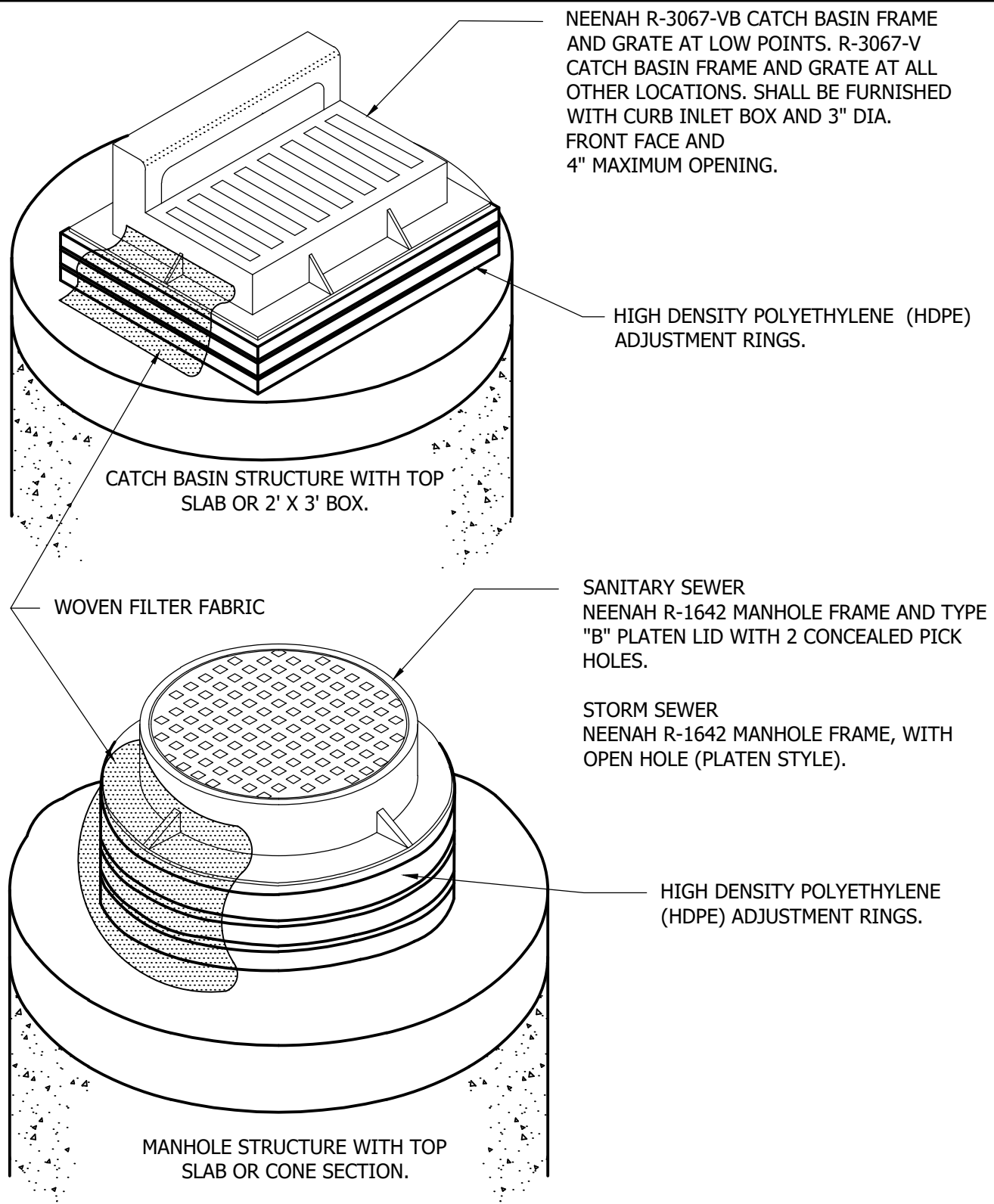


## TYPICAL BITUMINOUS TRAIL INTERSECTION

LAST REVISION:  
January 2020

PLATE NO.  
**STR-17**

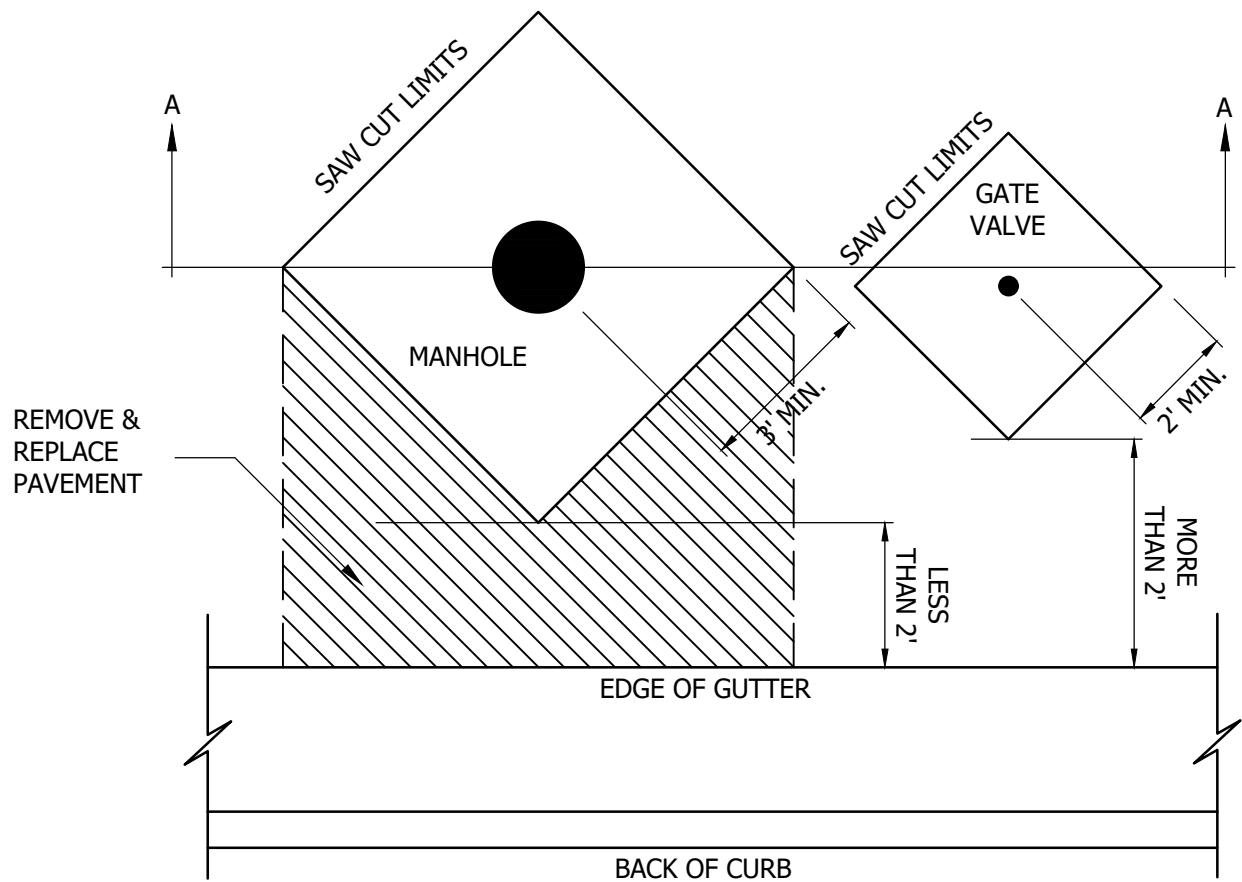
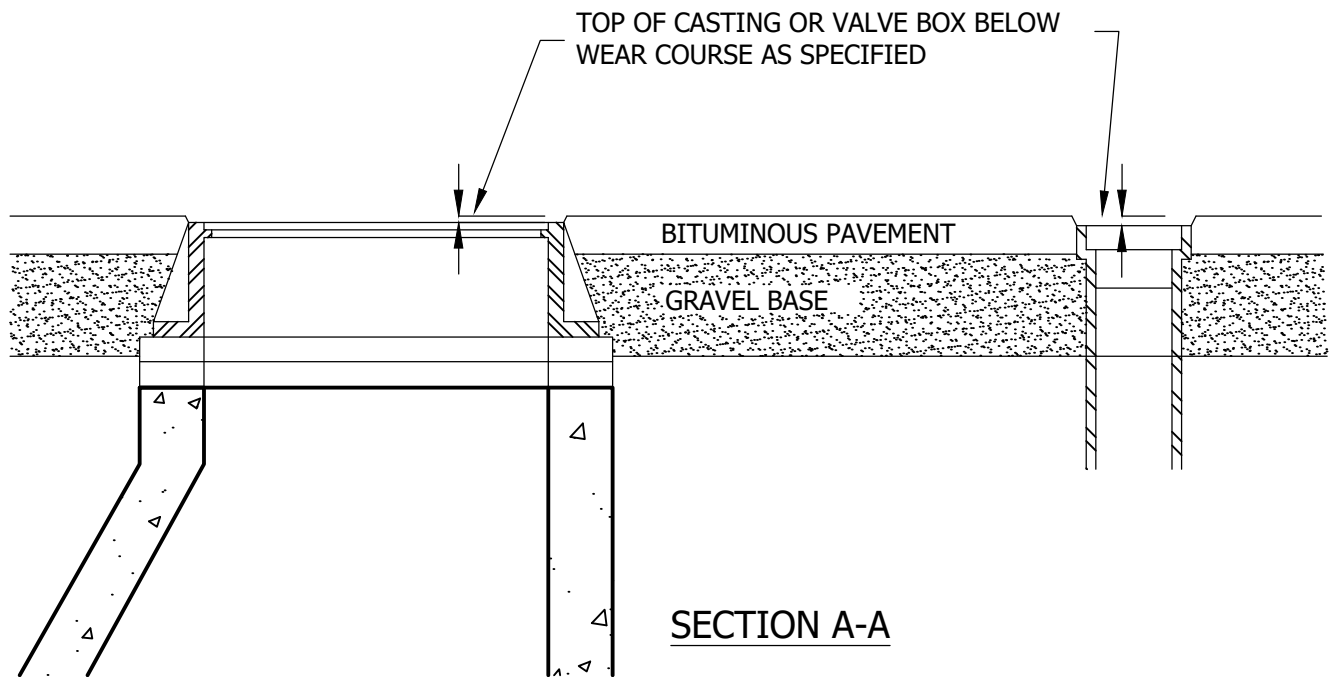




## CATCH BASIN & MANHOLE ADJUSTMENT (HIGH DENSITY POLYETHYLENE RINGS)

LAST REVISION:  
February 2012

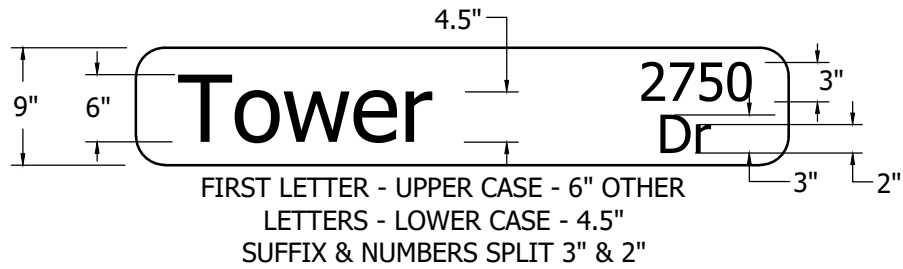
PLATE NO.  
**STR-18**



## MANHOLE AND GATE VALVE ADJUSTMENT IN PAVEMENT

LAST REVISION:  
December 2019

PLATE NO.  
**STR-18A**



### PUBLIC - THROUGH STREET



### PUBLIC - CUL-DE-SAC

### STANDARD CONSTRUCTION NOTES FOR STREET NAME SIGNS

1. ALL STREET SIGNS SHALL BE SINGLE-FACED FLAT BLADES.
2. ADDRESS NUMBERS FOR STREET NAME BLADES WILL BE PROVIDED AT A LATER DATE.
3. ALL PUBLIC STREET NAME BLADES SHALL BE "GREEN" IN COLOR. LETTERING ON ALL STREET NAME BLADES SHALL BE "WHITE" IN COLOR.
4. ALL STREET NAME BLADE SIGNS NEED TO BE SECURED USING 3/8" DRIVE RIVETS WITH NYLON WASHER TO POST, AND #34 CHERRYMATE RIVETS WITH 1-3/4" PVC SPACER ON ENDS.



### STREET NAME BLADE SIGNS PUBLIC STREETS

LAST REVISION:  
February 2014

PLATE NO.  
**STR-19**



FIRST LETTER- UPPER CASE - 6" OTHER  
LETTERS - LOWER CASE - 4.5"  
SUFFIX & NUMBERS SPLIT 3" & 2"

### PRIVATE - THROUGH STREET



FIRST LETTER - UPPER CASE - 6" OTHER  
LETTERS - LOWER CASE - 4.5"  
SUFFIX & NUMBERS SPLIT 3" & 2"

### PRIVATE - CUL-DE-SAC

## STANDARD CONSTRUCTION NOTES FOR STREET NAME SIGNS

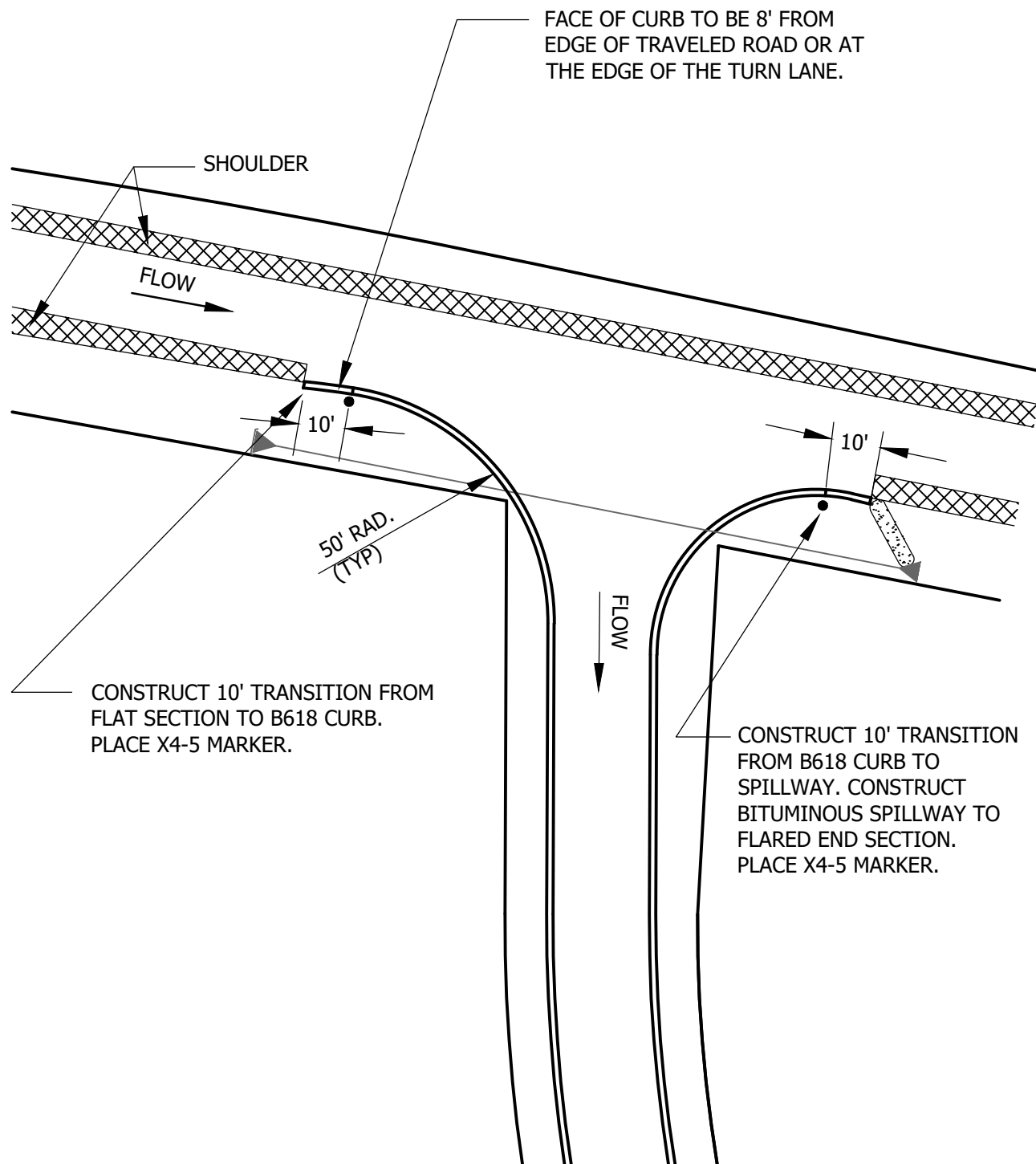
1. ALL STREET SIGNS SHALL BE SINGLE-FACED FLAT BLADES
2. ADDRESS NUMBERS FOR STREET NAME BLADES WILL BE PROVIDED AT A LATER DATE.
3. ALL PRIVATE STREET NAME BLADES SHALL BE "BLUE" IN COLOR. LETTERING ON ALL STREET NAME BLADES SHALL BE "WHITE" IN COLOR.
4. ALL STREET NAME BLADE SIGNS NEED TO BE SECURED USING 3/8" DRIVE RIVETS WITH NYLON WASHER TO POST, AND #34 CHERRYMATE RIVETS WITH 1-3/4" PVC SPACER ON ENDS.



## STREET NAME BLADE SIGNS PRIVATE STREETS

LAST REVISION:  
February 2014

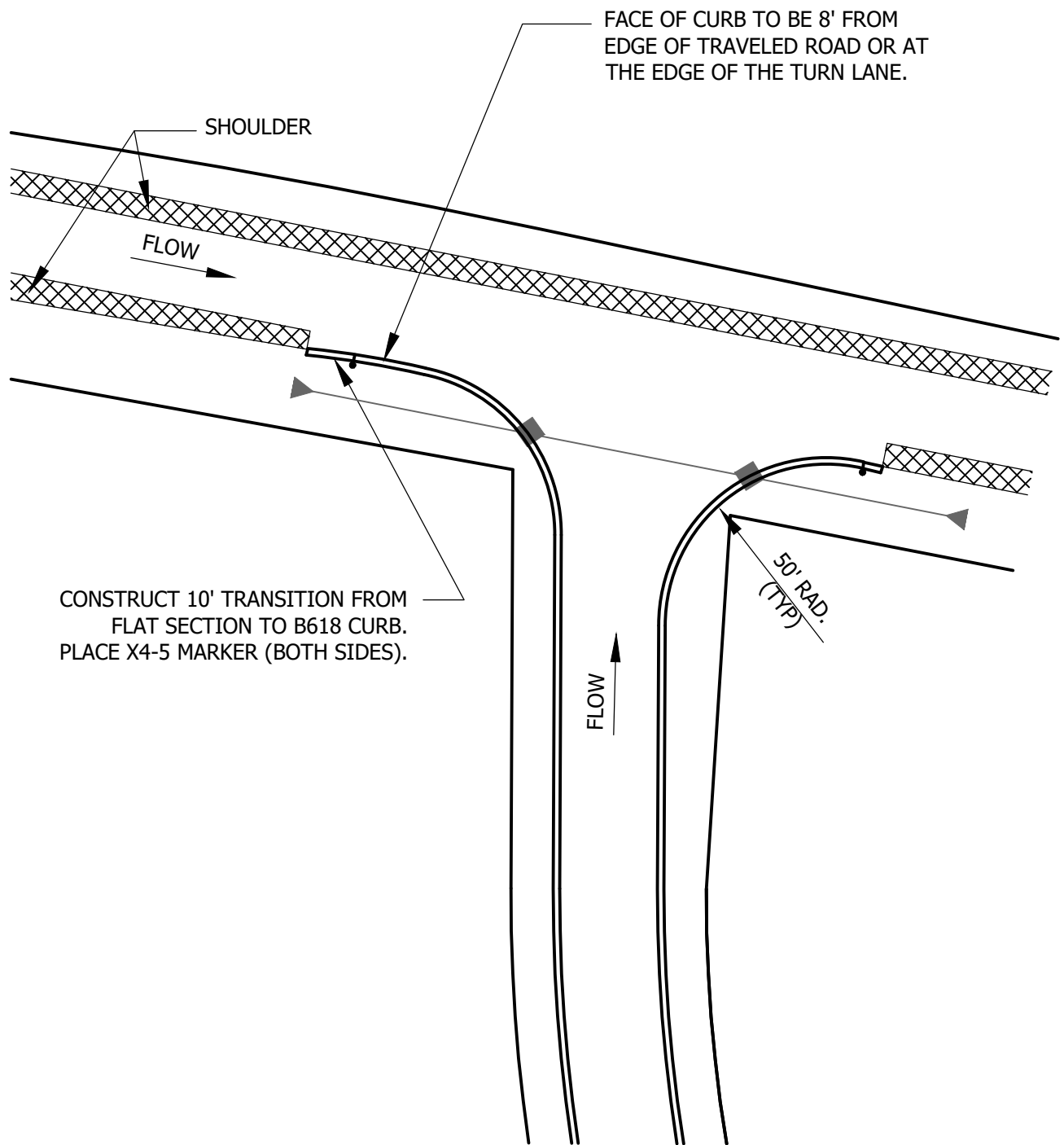
PLATE NO.  
**STR-20**



## RURAL ROADWAY STREET AND COMMERCIAL ENTRANCE

LAST REVISION:  
April 2004

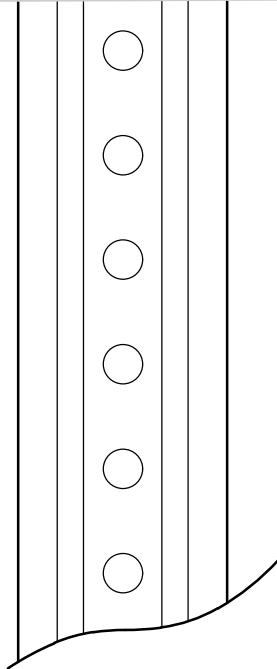
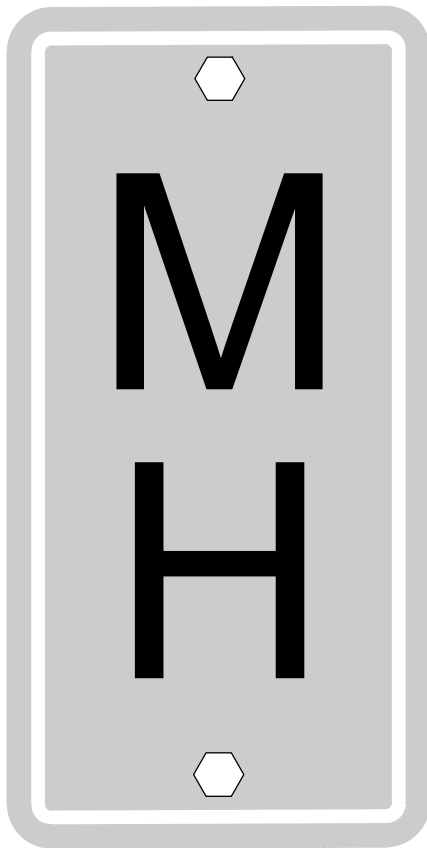
PLATE NO.  
**STR-21**



## RURAL ROADWAY STREET AND COMMERCIAL ENTRANCE

LAST REVISION:  
April 2004

PLATE NO.  
**STR-22**



NOTES:

1. LETTERS ON SIGN VARY DEPENDING ON UTILITY SIGN IS INSTALLED ADJACENT TO (SEE SPECIFICATIONS).



STRUCTURE MARKER SIGN

LAST REVISION:  
December 2019

PLATE NO.  
**STR-23**

# FUTURE ROAD EXTENSION



NOTES:

1. SIGN SIZE SHALL BE 24"x30".
2. LETTERS TO BE BLACK ON A WHITE BACKGROUND.
3. THE LEAF PORTION OF THE LOGO FOR THE CITY OF WOODBURY SHALL BE GREEN.
4. THE SIGN IS TO BE MOUNTED ON THE PERMANENT BARRICADE, TOP INSIDE POST.

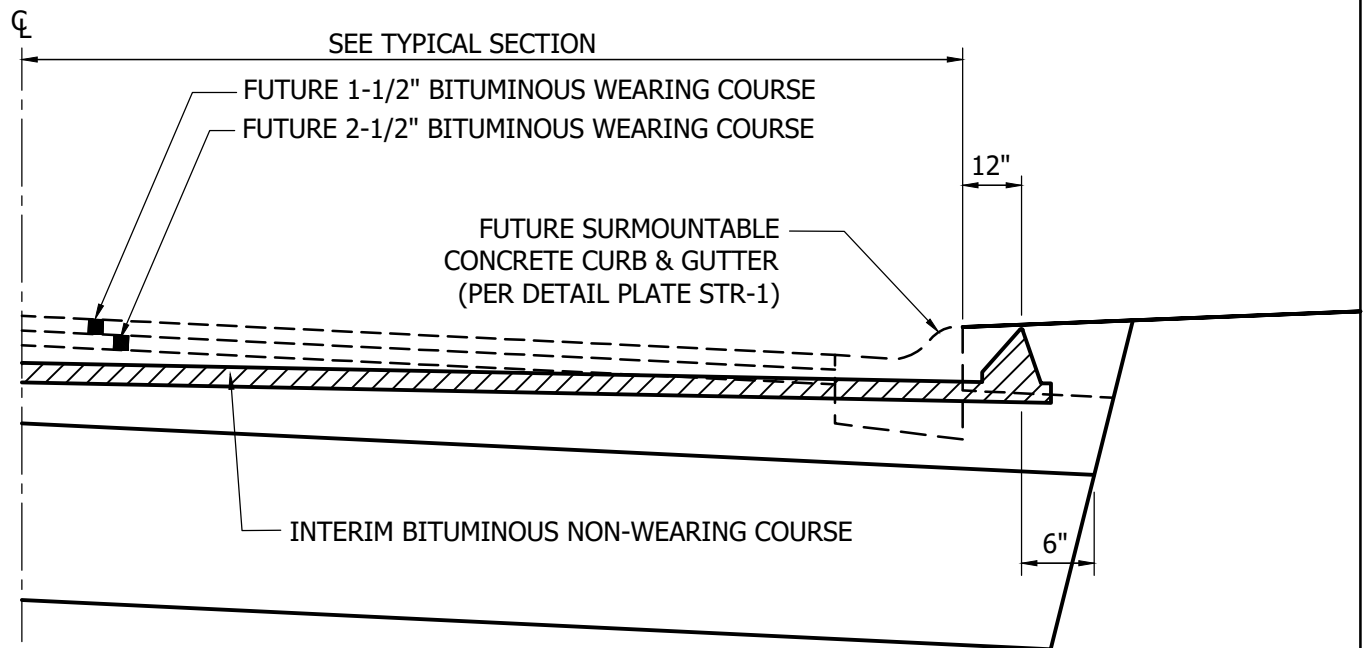
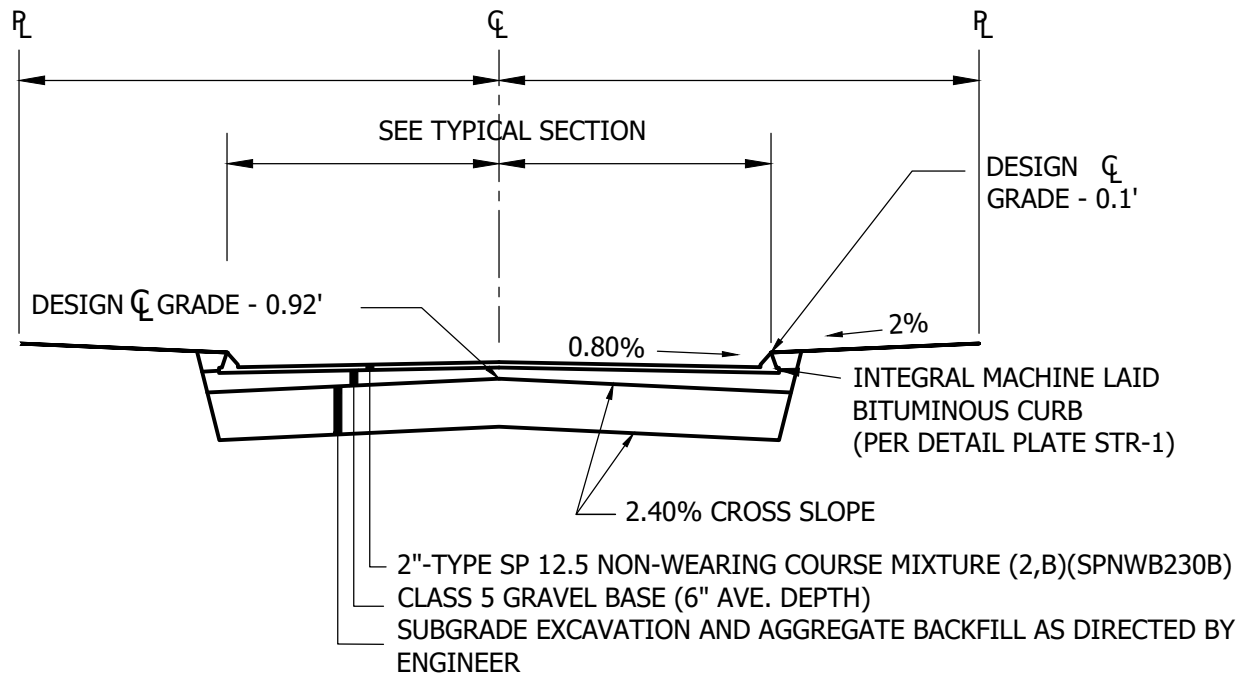


FUTURE ROAD EXTENSION SIGN

LAST REVISION:  
Feb. 2008

PLATE NO.  
**STR-24**





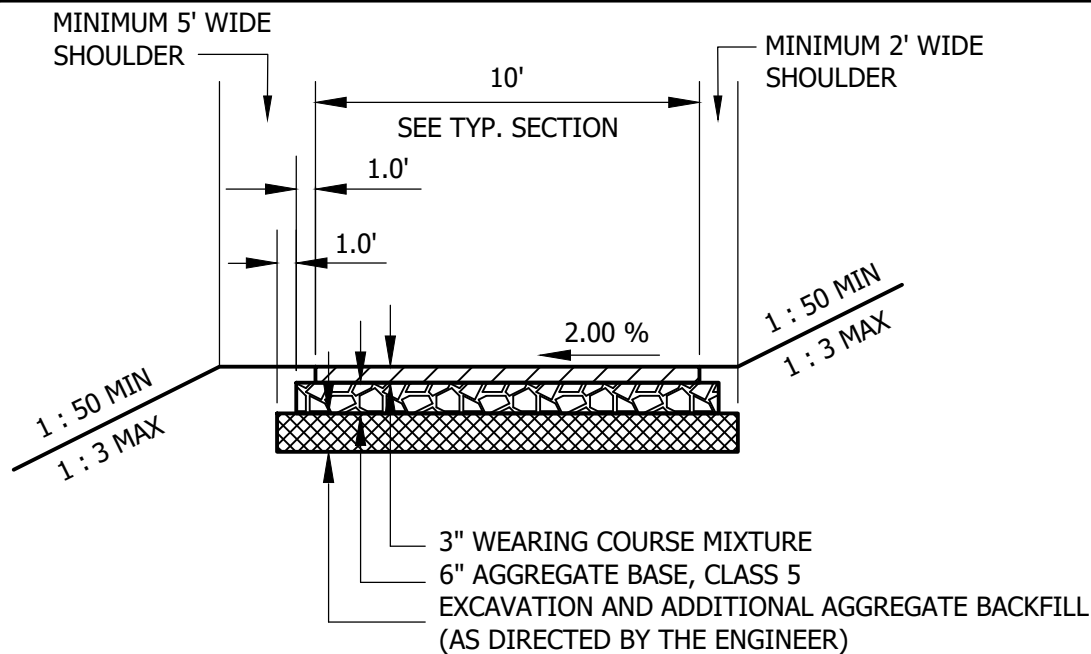
NOTE:  
ULTIMATE STREET SECTION REFER TO DETAIL PLATE STR-14



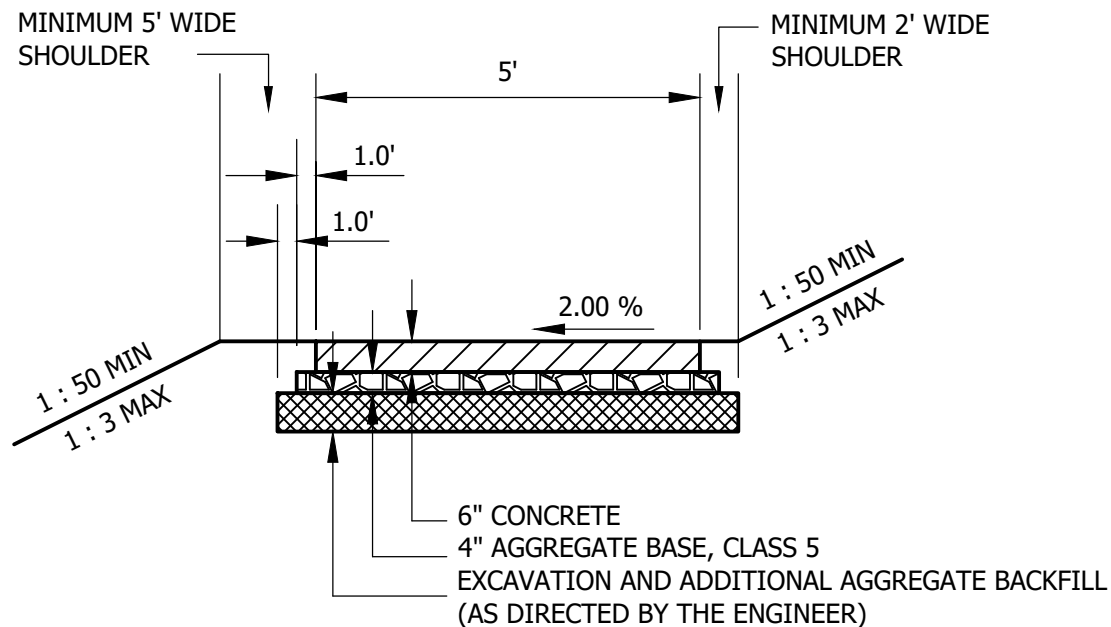
## TYPICAL INTERIM RESIDENTIAL STREET SECTION

LAST REVISION:  
February 2015

PLATE NO.  
**STR-25**



### BITUMINOUS TRAIL



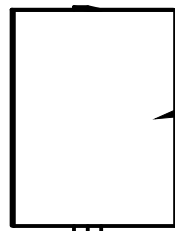
### CONCRETE SIDEWALK



TYPICAL SECTION FOR BITUMINOUS  
TRAIL AND CONCRETE SIDEWALK

LAST REVISION:  
November 2019

PLATE NO.  
STR-26



SIGN PANELS AS SPECIFIED OR AS SHOWN  
ON THE PLANS OR SIGN LEGEND.



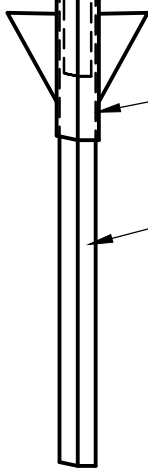
1-3/4 INCH TELES PAR SIGN POST

#### STREET SIGNS

1. BREAK OFF TO BE SET AT FINISH GRADE.
2. ANCHOR SLEEVE TO BE SET WITH TWO BOLT HOLES EXPOSED AND ACCESSIBLE ABOVE FINISH GRADE.



2-1/4 INCH, 18 INCH LONG OMNI SLEEVE



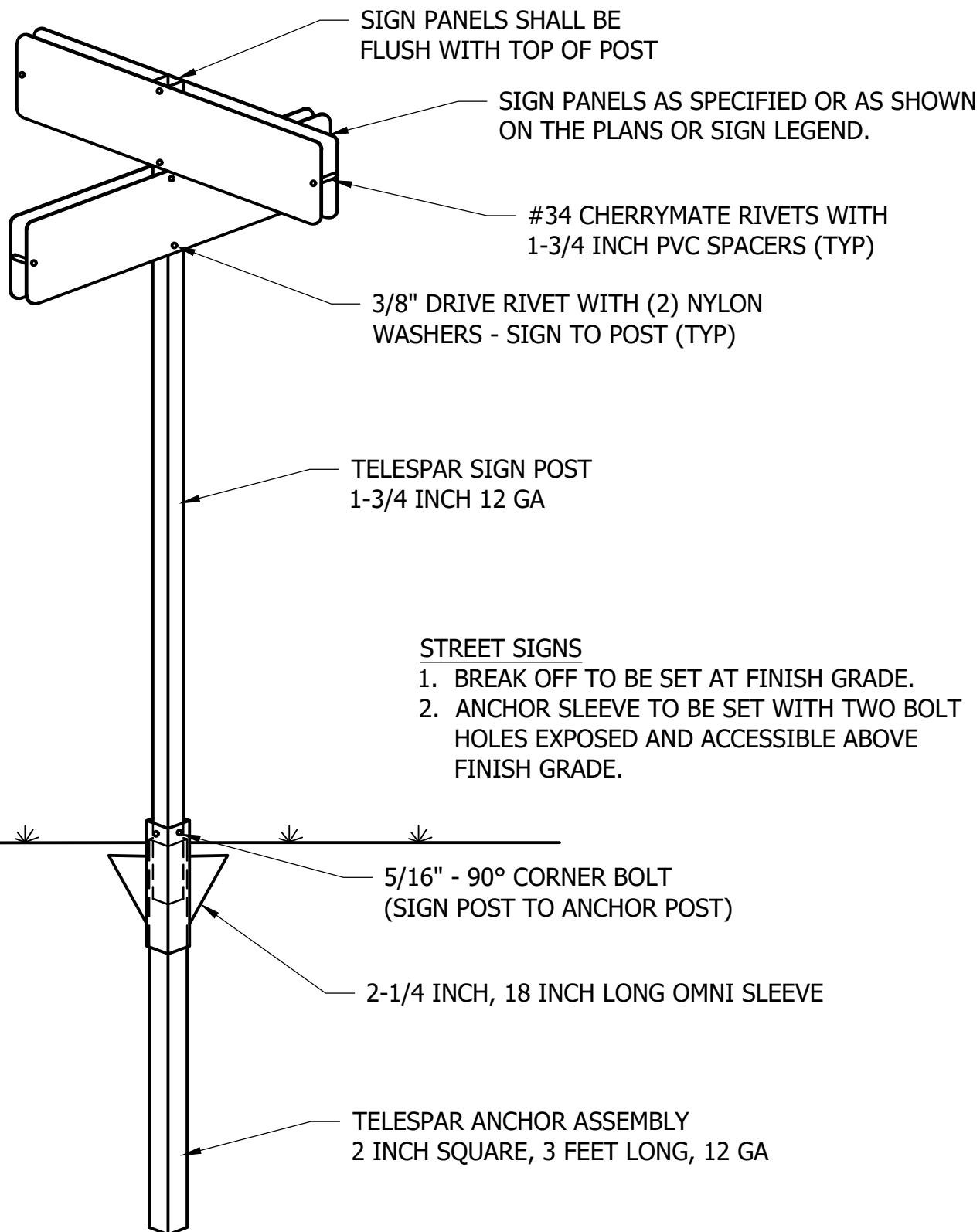
TELES PAR ANCHOR ASSEMBLY  
2 INCH SQUARE, 3 FEET LONG, 12 GA



## TYPICAL TRAFFIC SIGN INSTALLATION BOULEVARD

LAST REVISION:  
February 2014

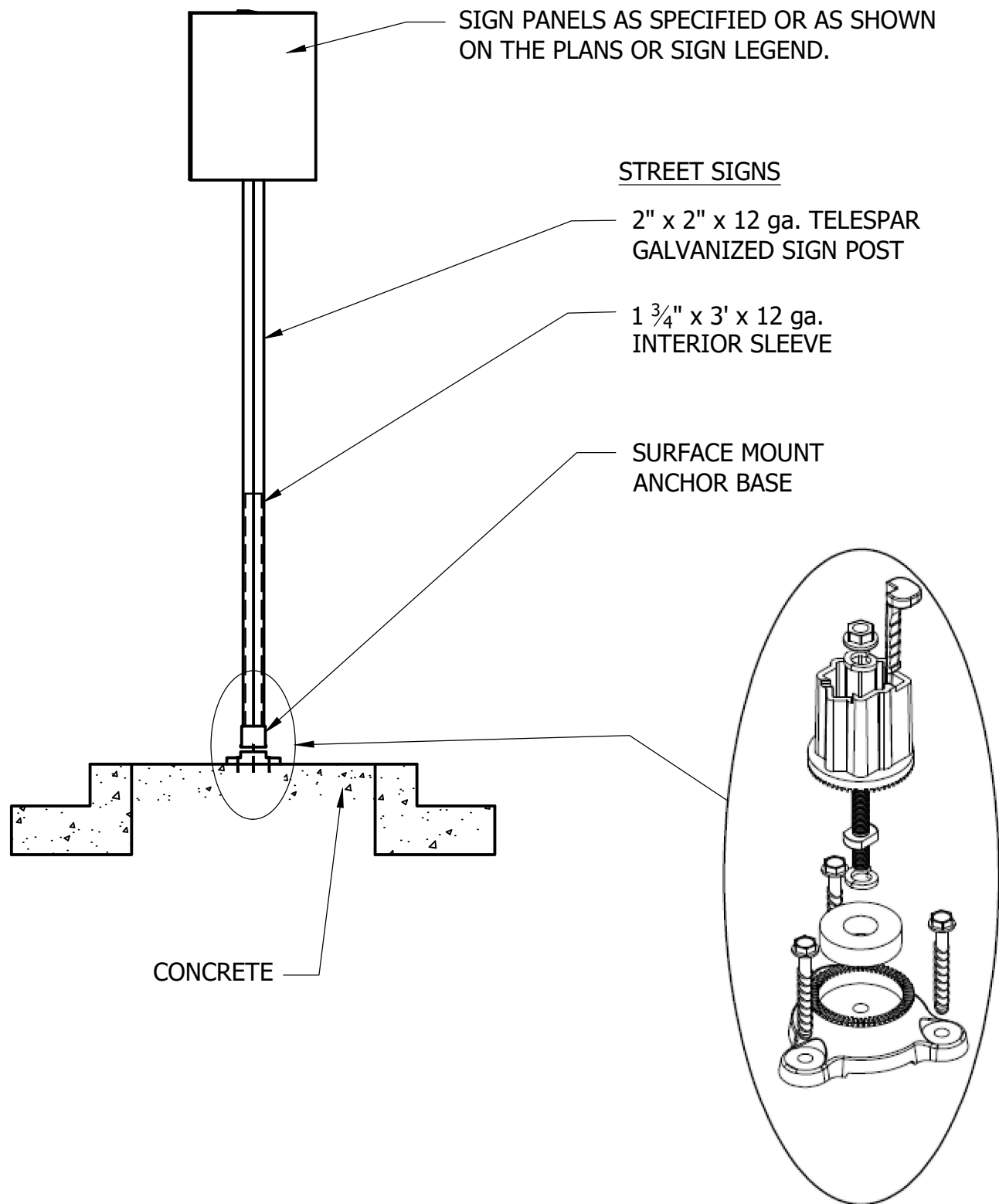
PLATE NO.  
**STR-27**



# TYPICAL TRAFFIC SIGN INSTALLATION STREET NAME BLADE SIGN

LAST REVISION:  
February 2014

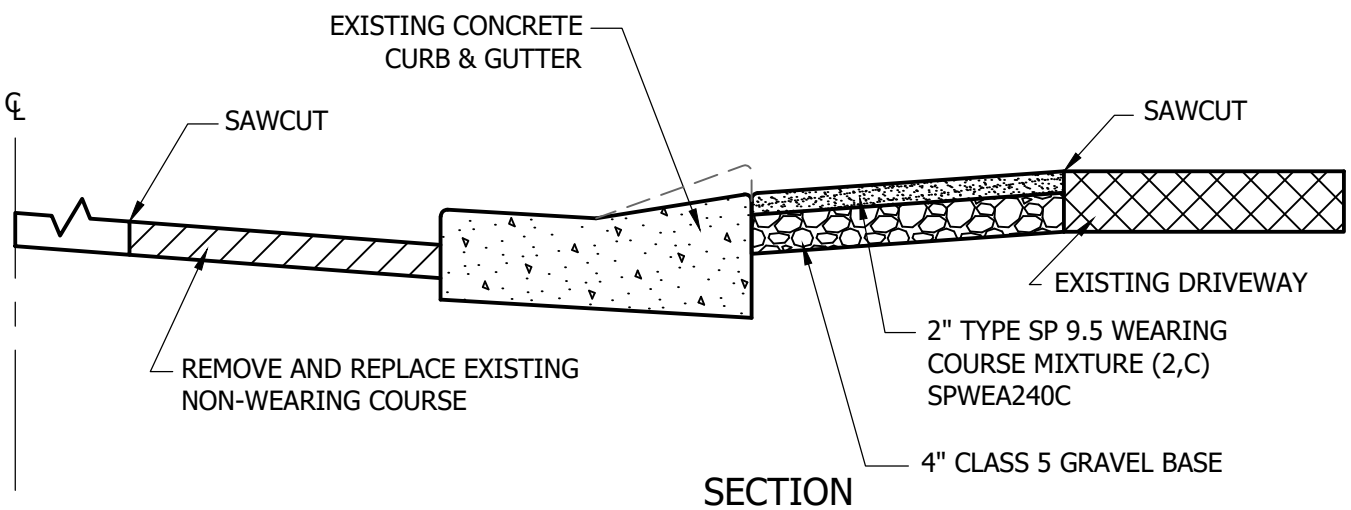
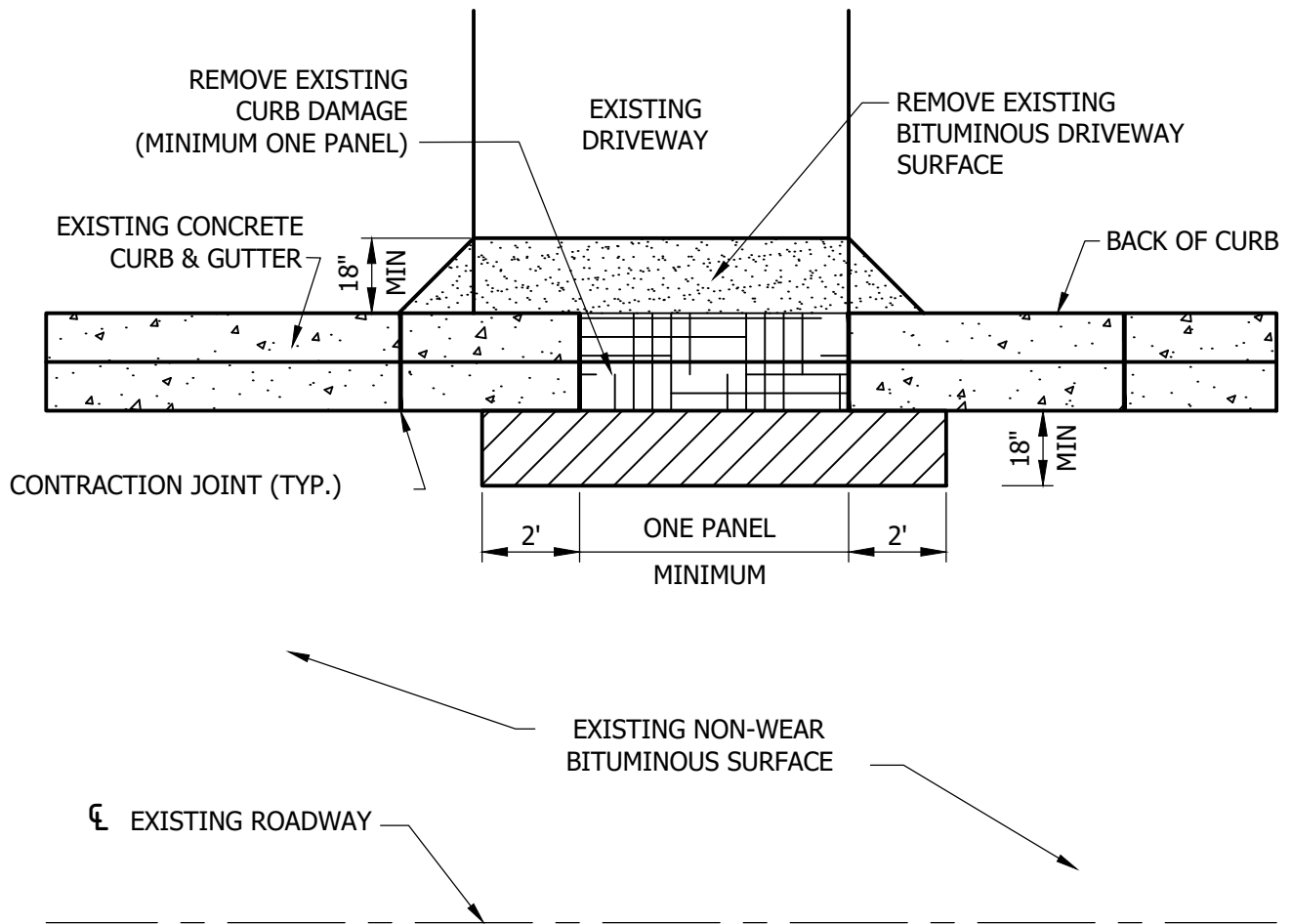
PLATE NO.  
STR-27A



## TYPICAL TRAFFIC SIGN INSTALLATION MEDIAN

LAST REVISION:  
January 2016

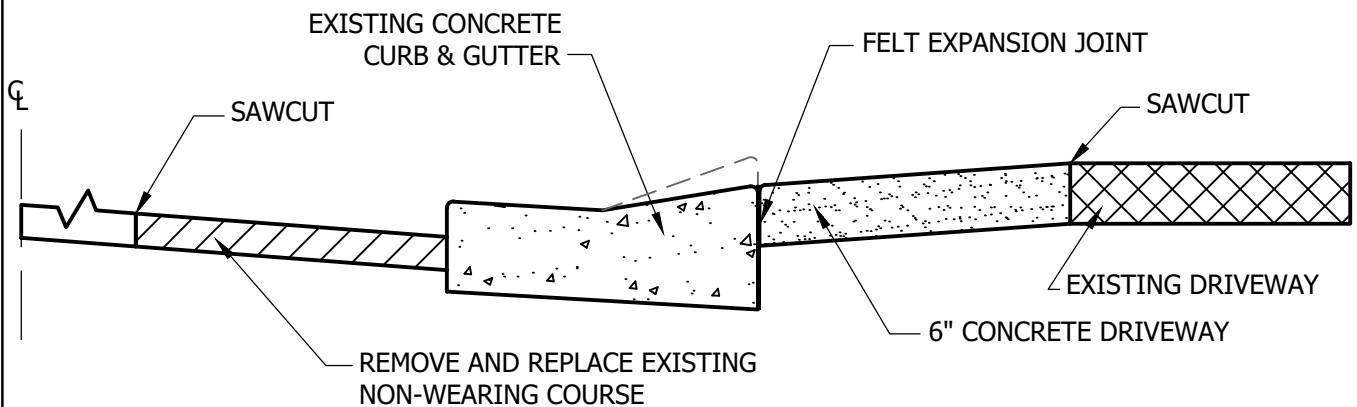
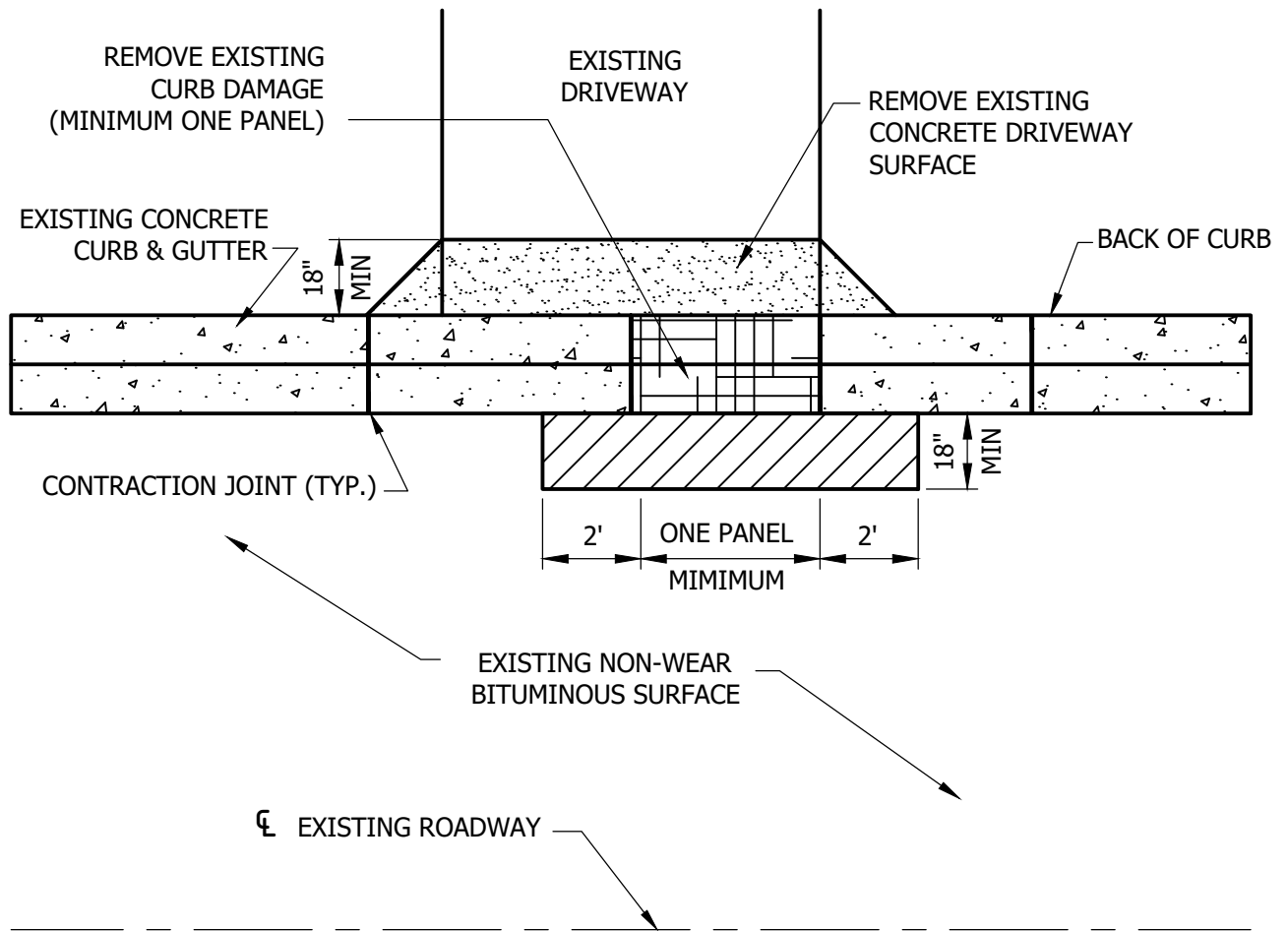
PLATE NO.  
**STR-28**



## CONCRETE CURB REPLACEMENT DRIVE LOCATION (BITUMINOUS D/W APRON)

LAST REVISION:  
February 2014

PLATE NO.  
**STR-29**



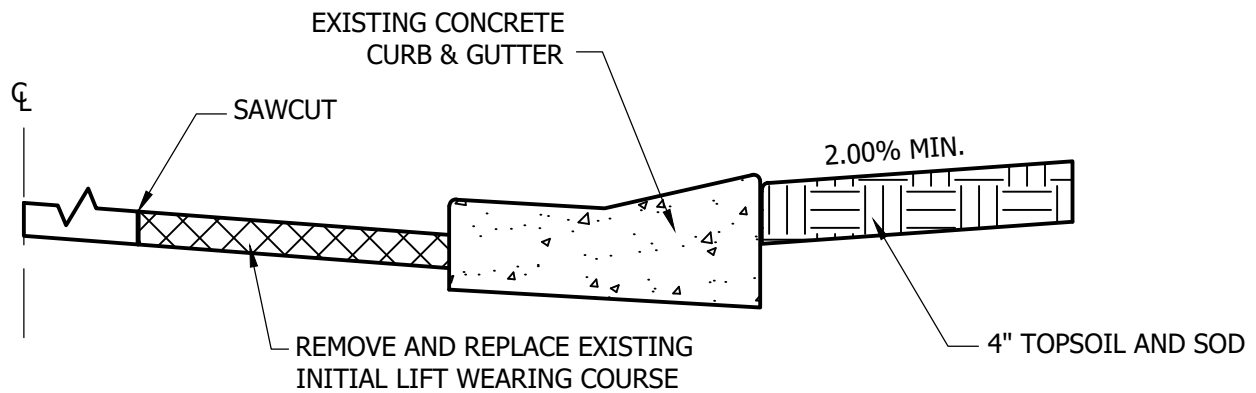
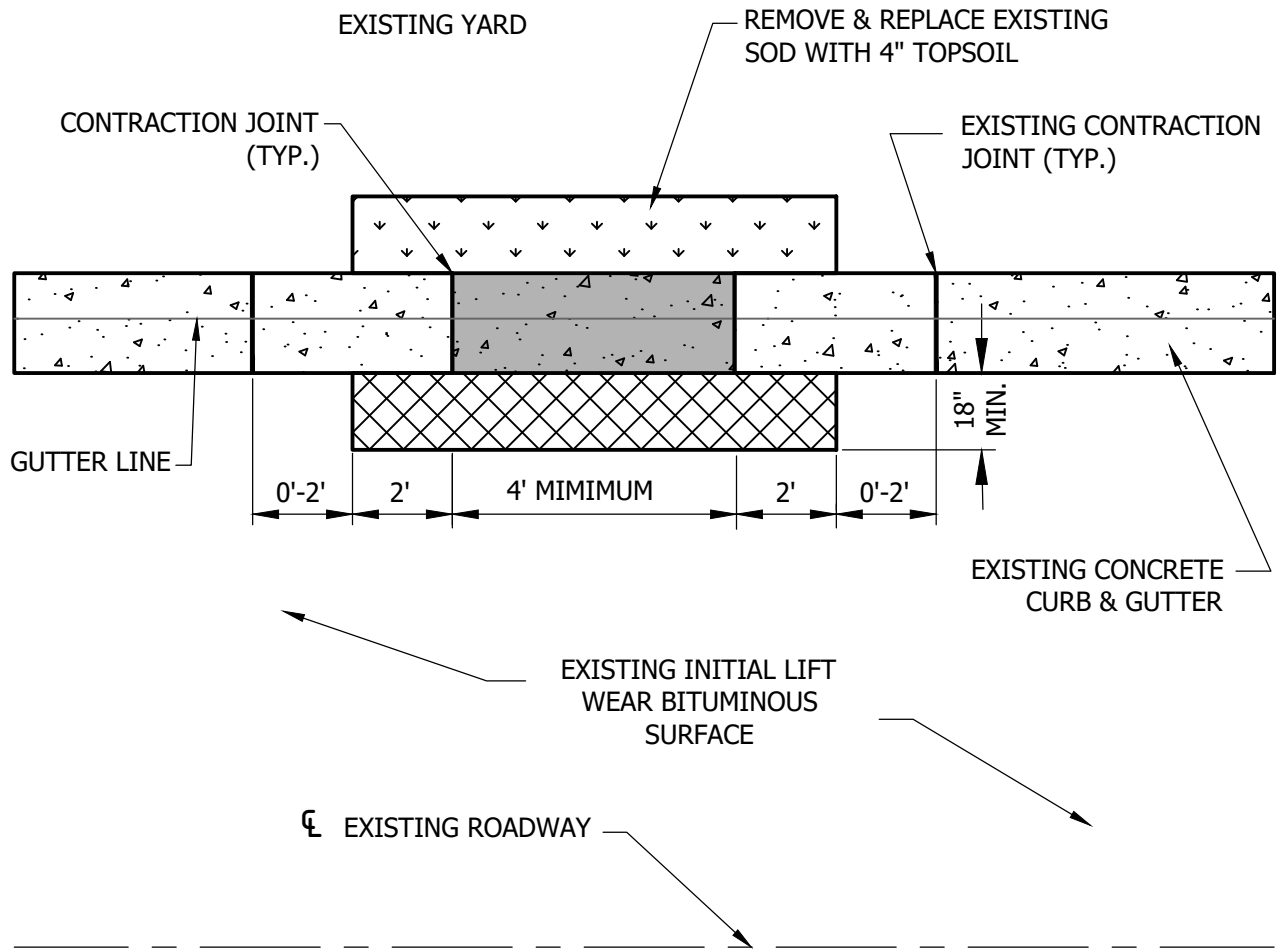
### SECTION



## CONCRETE CURB REPLACEMENT DRIVE LOCATION (CONCRETE D/W APRON)

LAST REVISION:  
February  
2014

PLATE NO.  
STR-30



### SECTION



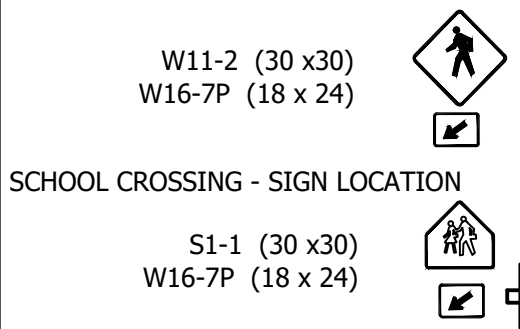
## CONCRETE CURB REPLACEMENT NON DRIVEWAY LOCATION

LAST REVISION:  
February 2015

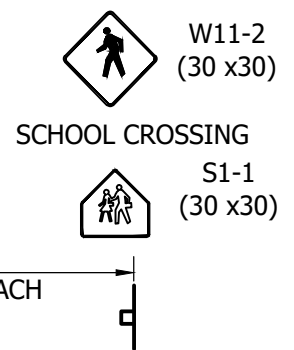
PLATE NO.  
STR-31



# PEDESTRIAN CROSSING - SIGN LOCATION



# PEDESTRIAN CROSSING



CITY OF WOODBURY  
STREET

12" SOLID CROSSWALK  
MARKINGS

6' (8' PATHWAY)  
8' (10' PATHWAY)

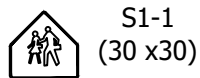
ALL STRIPING TO END  
AT CROSSWALK MARKINGS



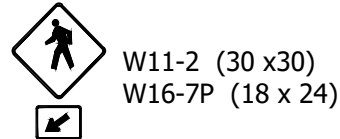
## PEDESTRIAN CROSSING



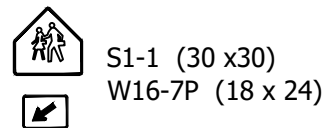
## SCHOOL CROSSING



## PEDESTRIAN CROSSING - SIGN LOCATION



## SCHOOL CROSSING - SIGN LOCATION



## NOTES:

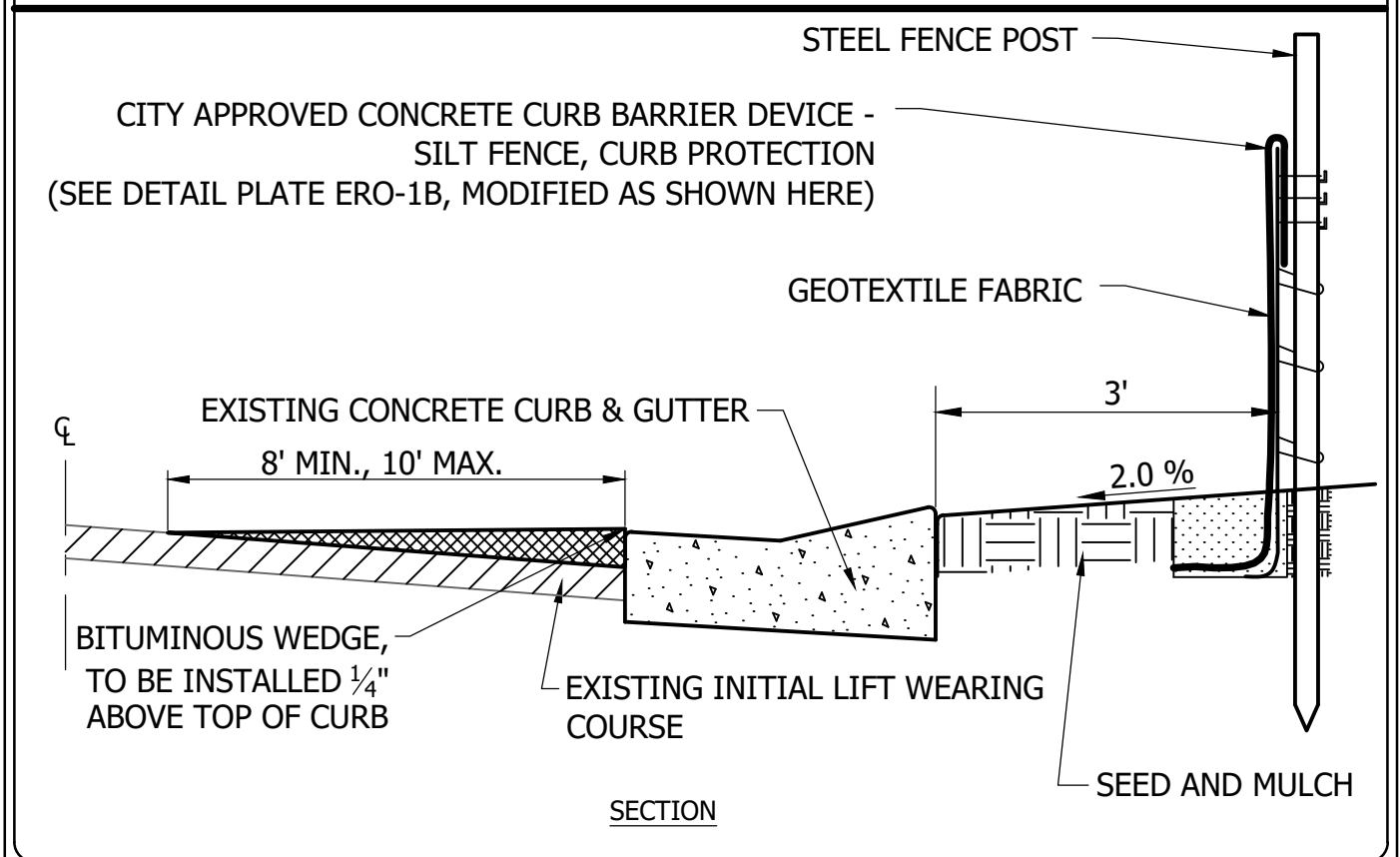
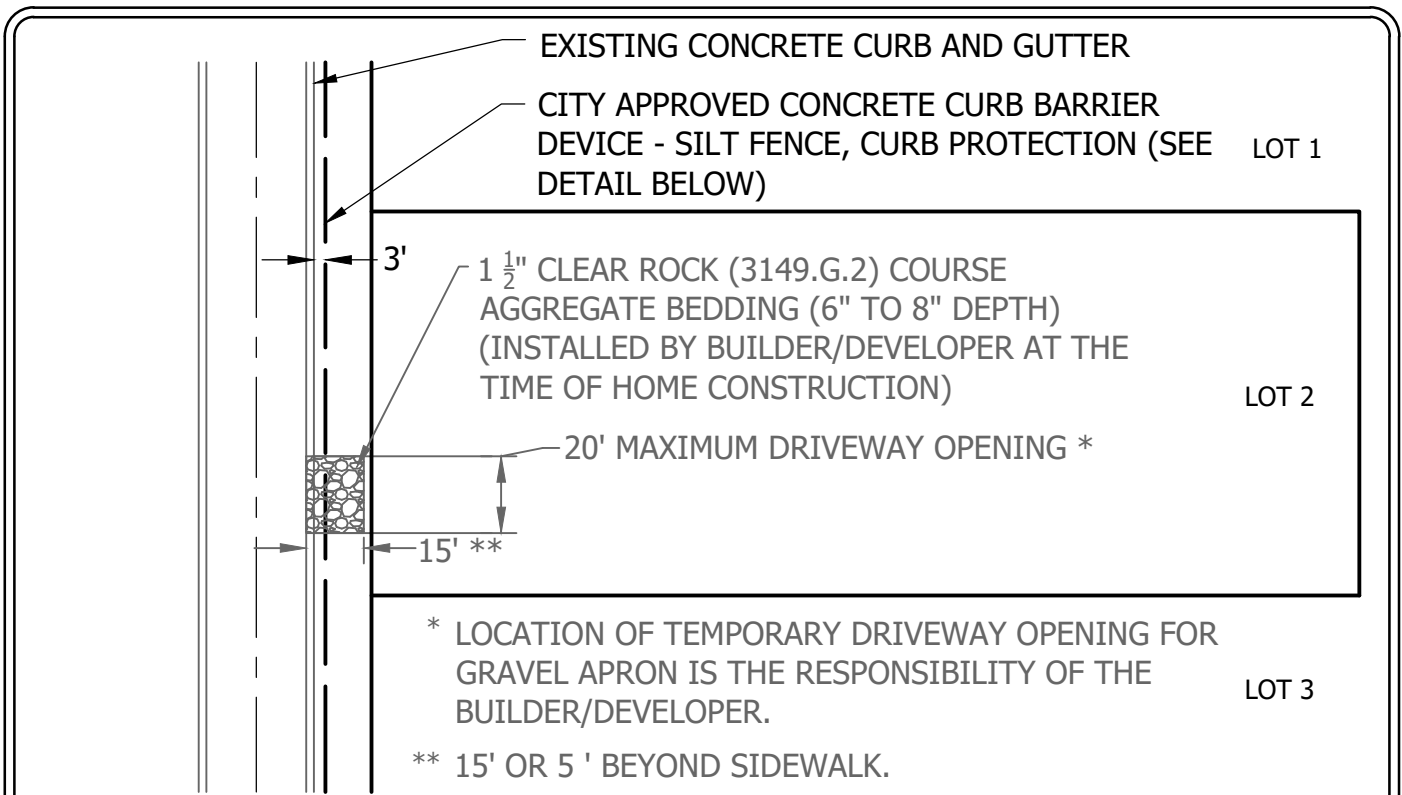
- 1) STREET SIGN, POST, AND ANCHOR SYSTEM INFORMATION CAN BE FOUND IN THE CURRENT CITY OF WOODBURY STANDARD PROJECT MANUAL FOR UTILITY AND STREET CONSTRUCTION.
- 2) SIGNS W11-2, S1-1, W16-7P SHALL BE FLUORESCENT YELLOW-GREEN REFLECTIVE SHEETING.
- 3) SIGN POSTS AND ANCHOR SYSTEM INSTALLATION, SEE STR-27 AND STR-28.

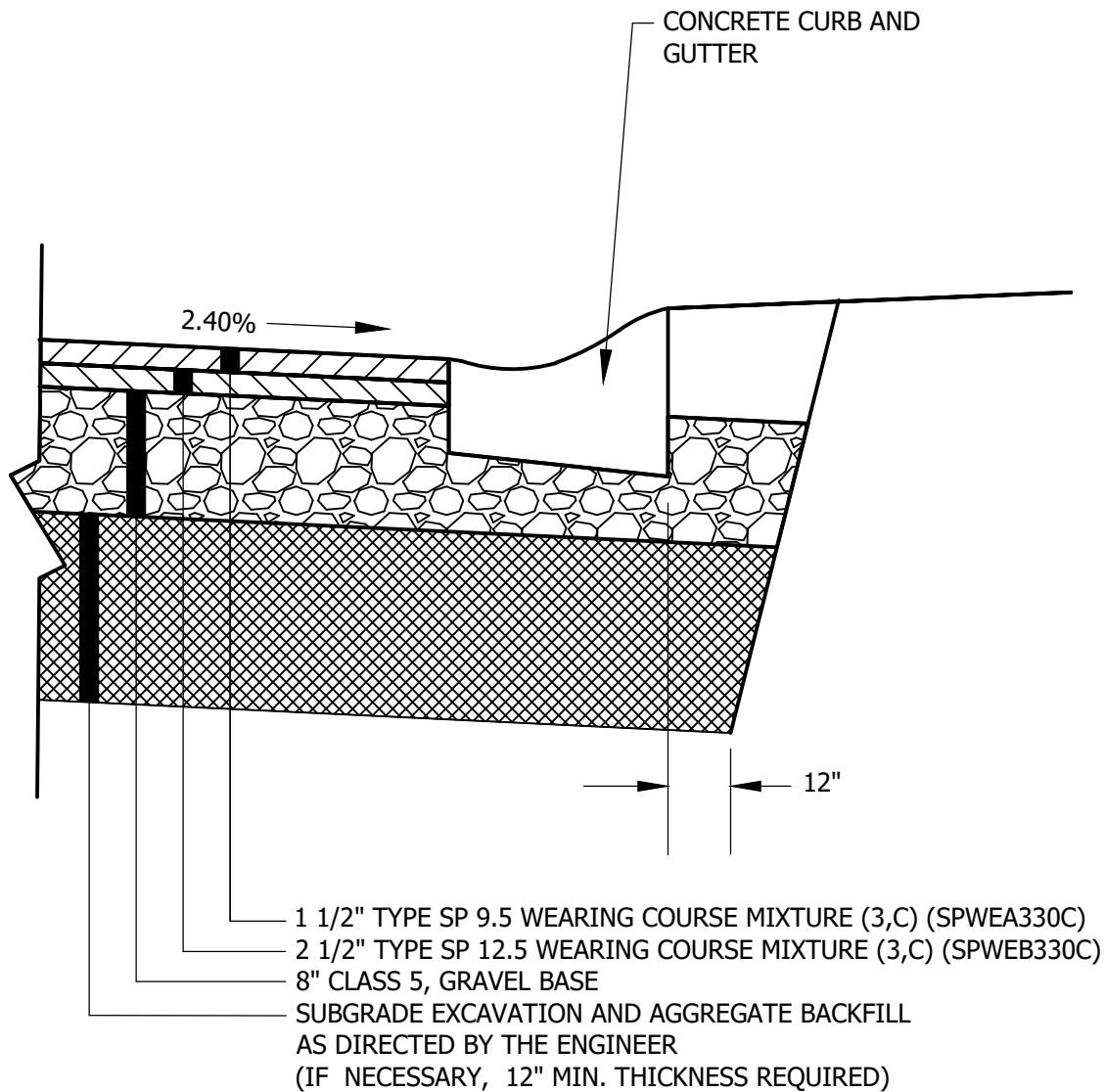


## CROSSWALK SIGNAGE DETAIL

LAST REVISION:  
March 2008

PLATE NO.  
STR-32





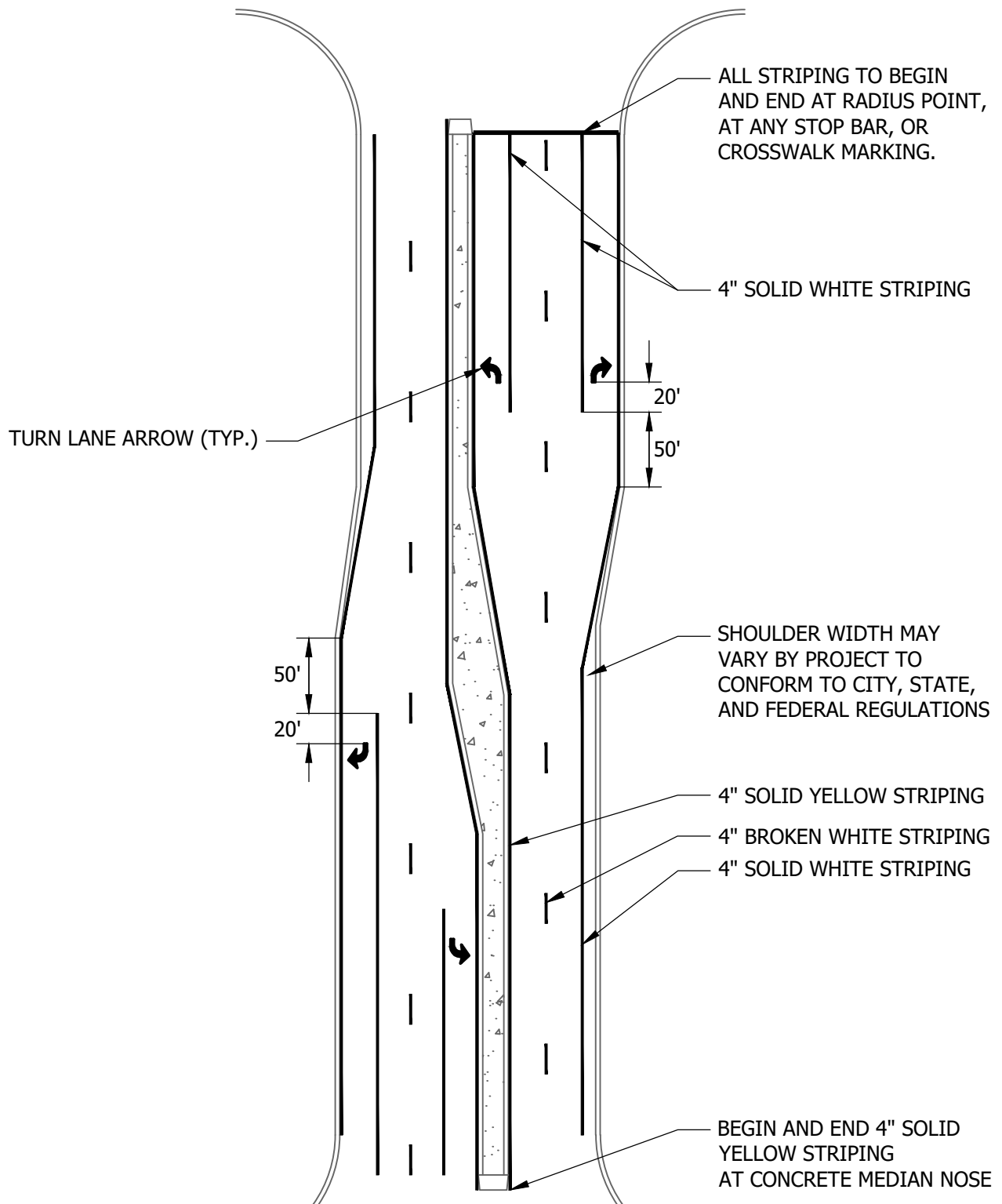
### STREET TYPICAL SECTION-RESIDENTIAL



### STREET TYPICAL SECTION FOR RESIDENTIAL STREETS

LAST REVISION:  
February 2015

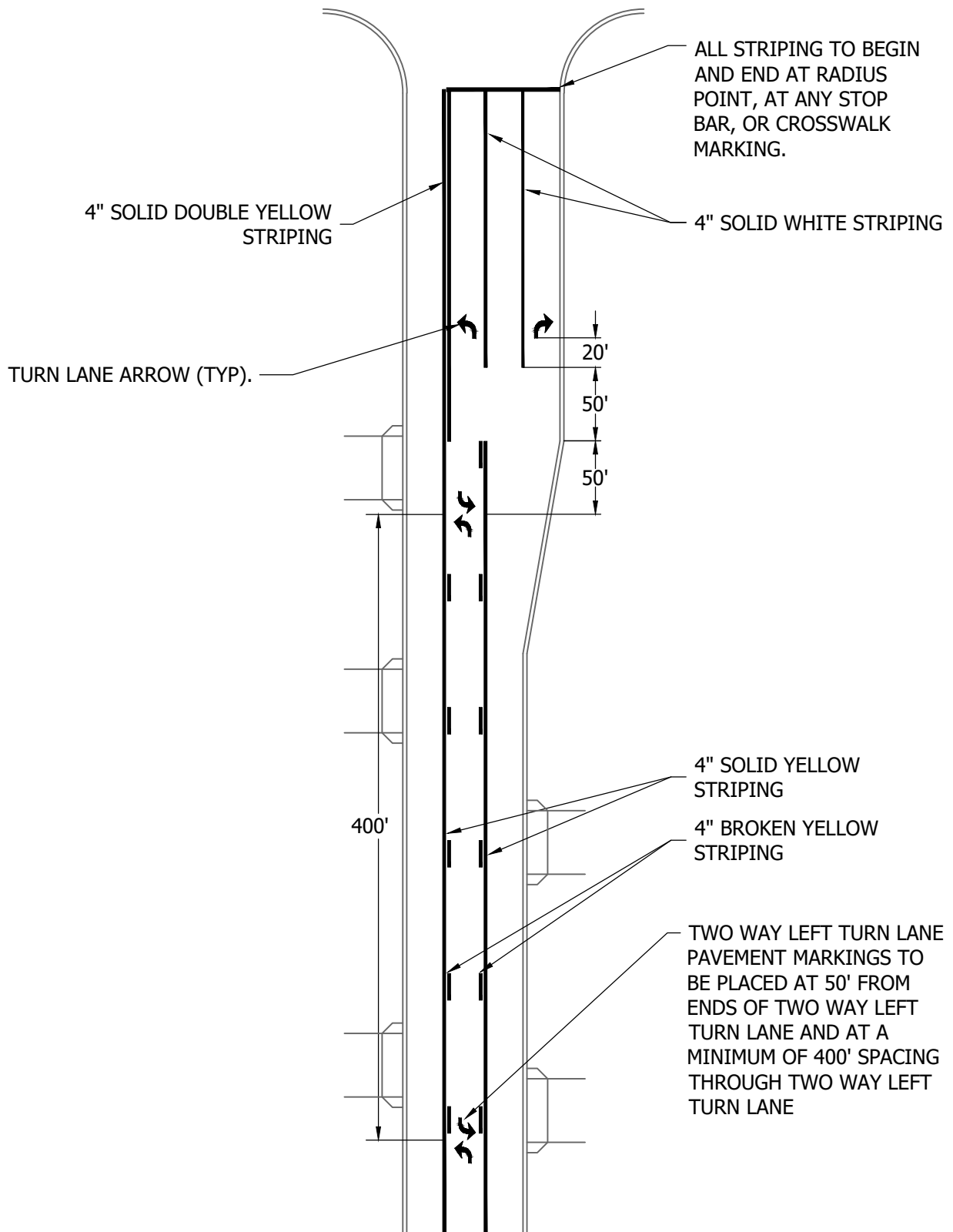
PLATE NO.  
**STR-34**



## STRIPING DETAIL WITH CONCRETE MEDIAN

LAST REVISION:  
January 2010

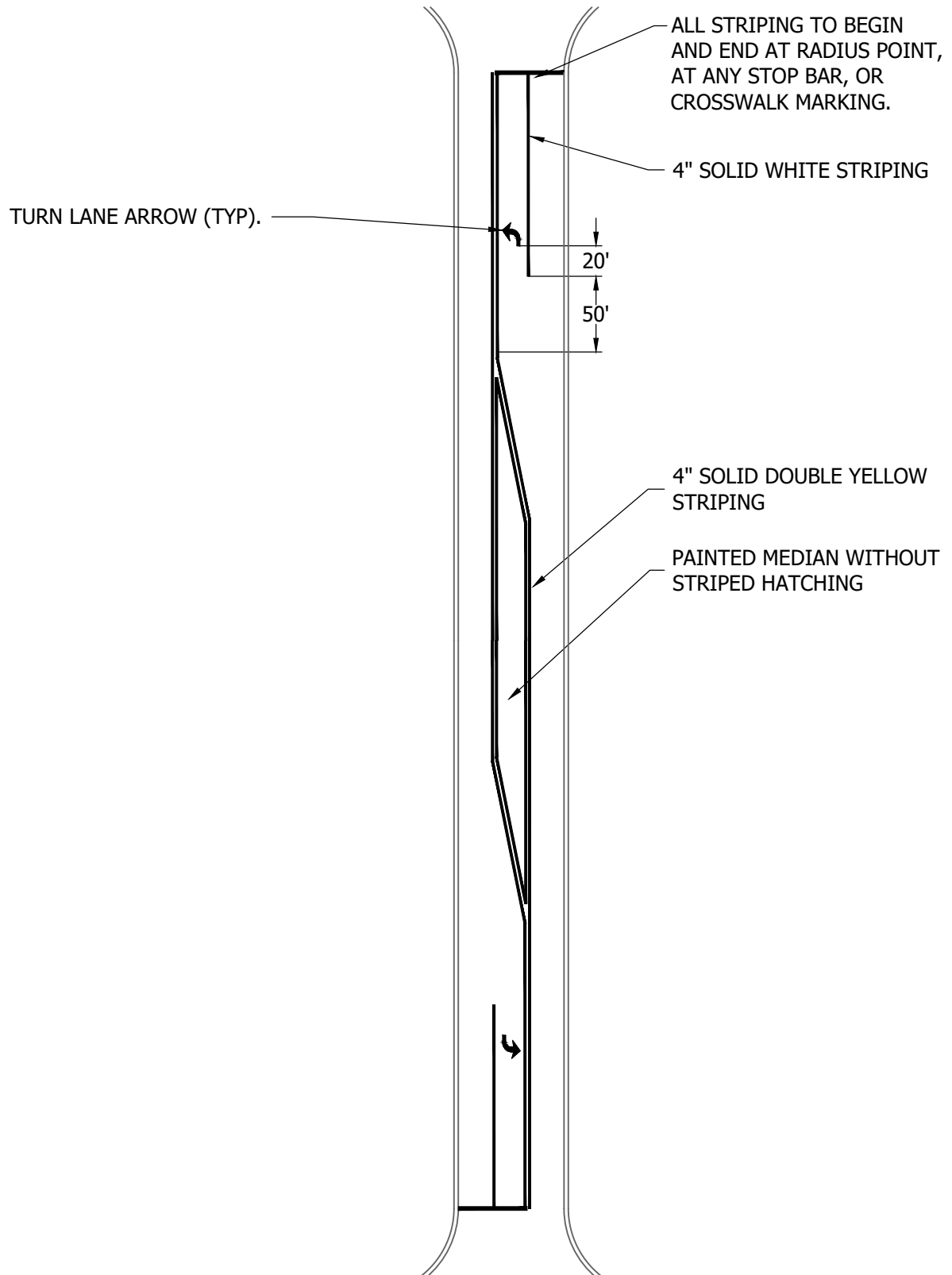
PLATE NO.  
**STR-35**



## STRIPING DETAIL WITH TWO WAY LEFT TURN LANES

LAST REVISION:  
January 2010

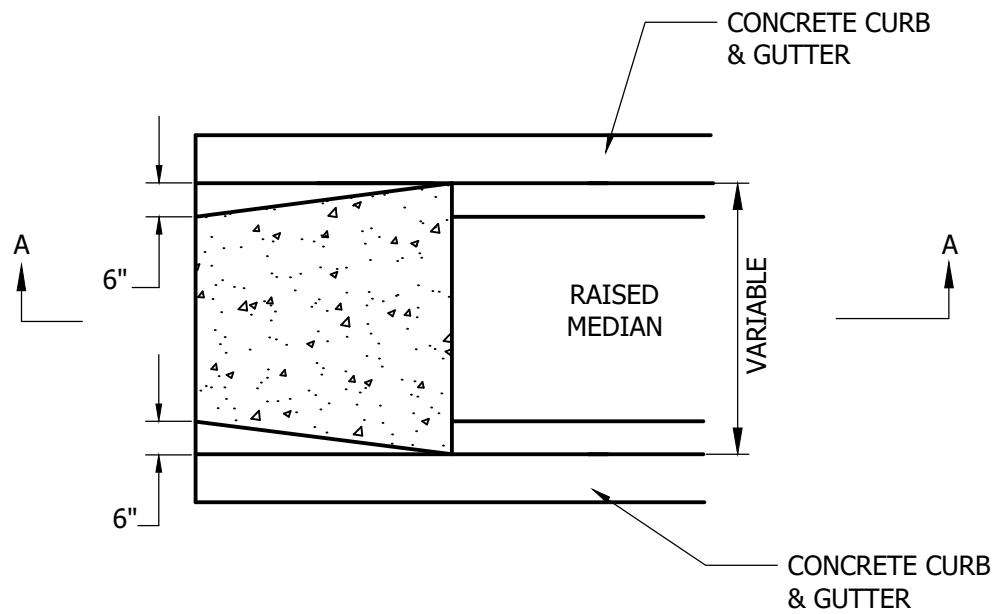
PLATE NO.  
**STR-36**



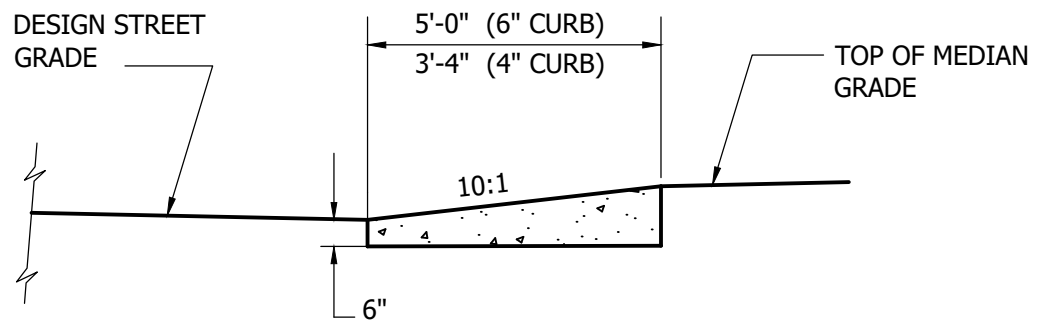
## STRIPING DETAIL WITH STRIPED MEDIAN

LAST REVISION:  
January 2010

PLATE NO.  
**STR-37**



PLAN



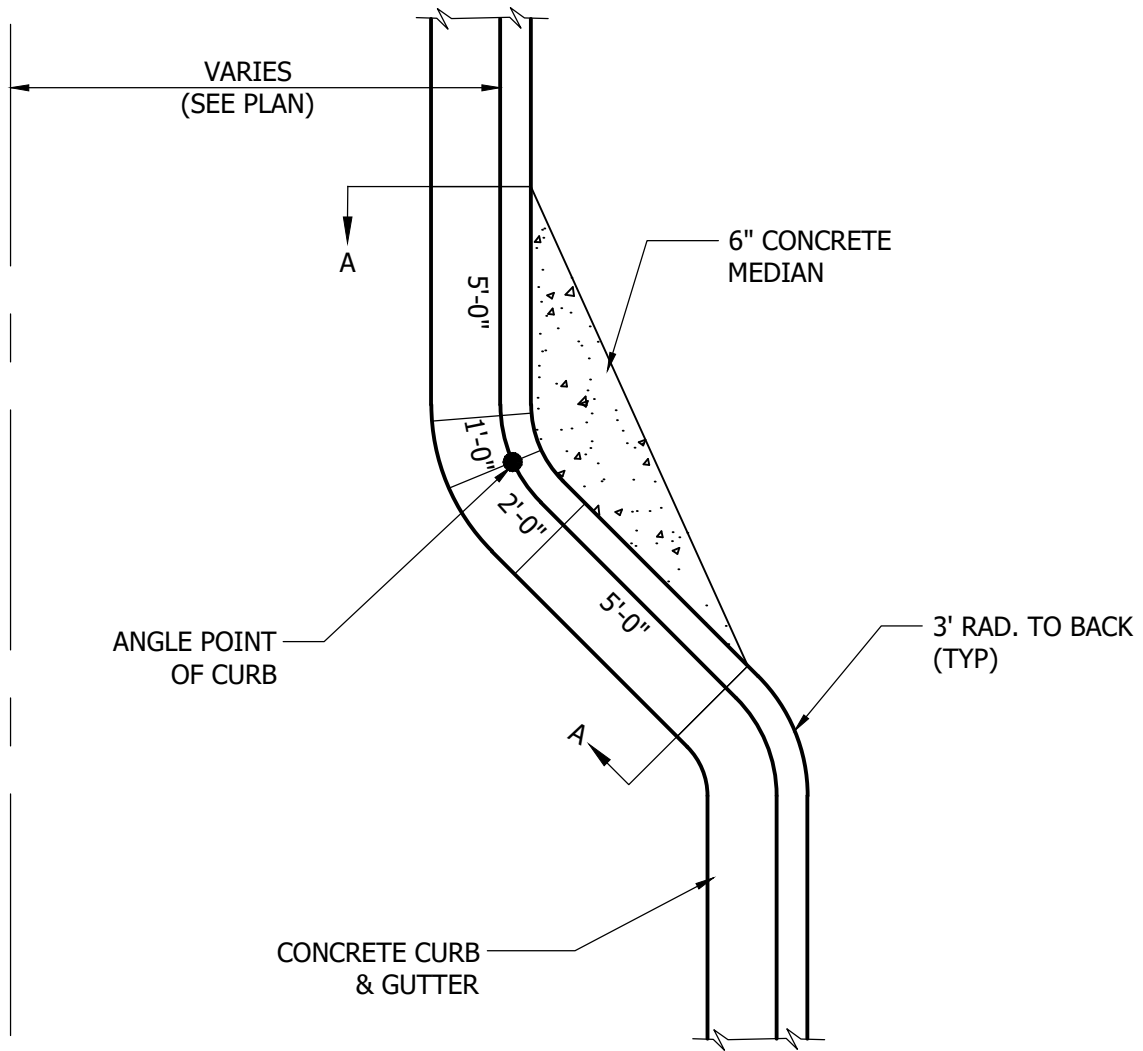
SECTION A-A



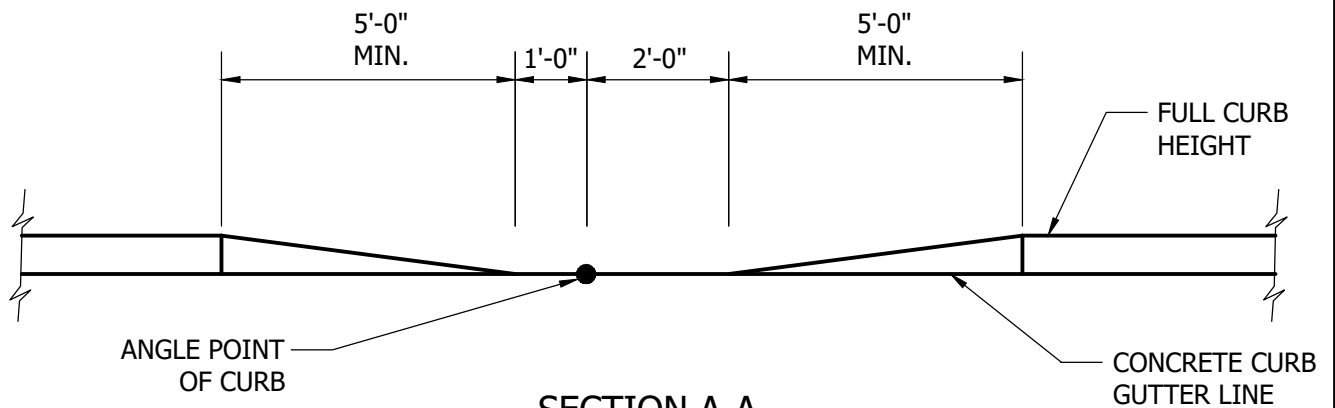
CONCRETE APPROACH  
NOSE DETAIL

LAST REVISION:  
May 2011

PLATE NO.  
**STR-38**



PLAN



SECTION A-A

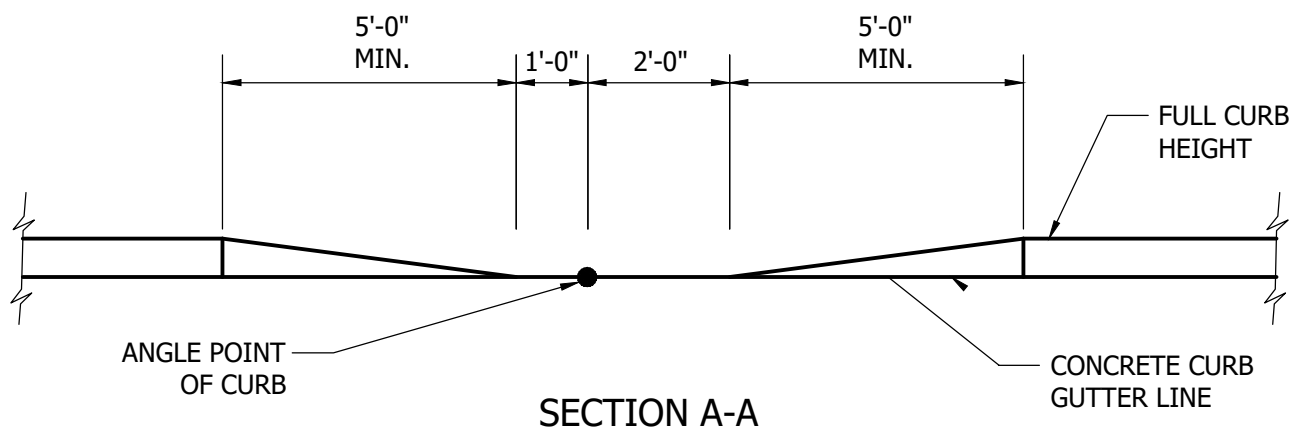
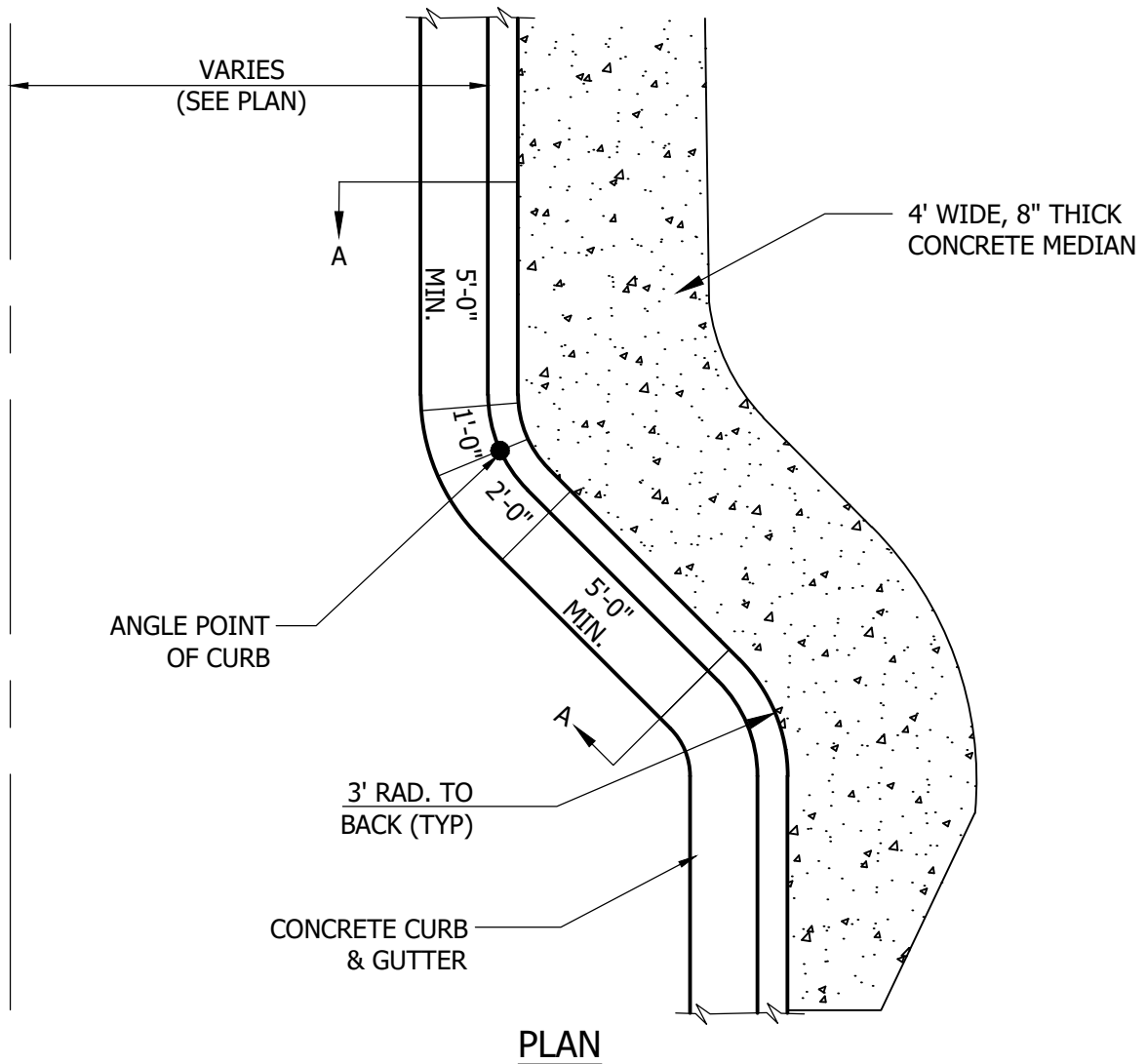


PARKING BAY  
NOSE DETAIL

LAST REVISION:  
February 2012

PLATE NO.  
**STR-39**

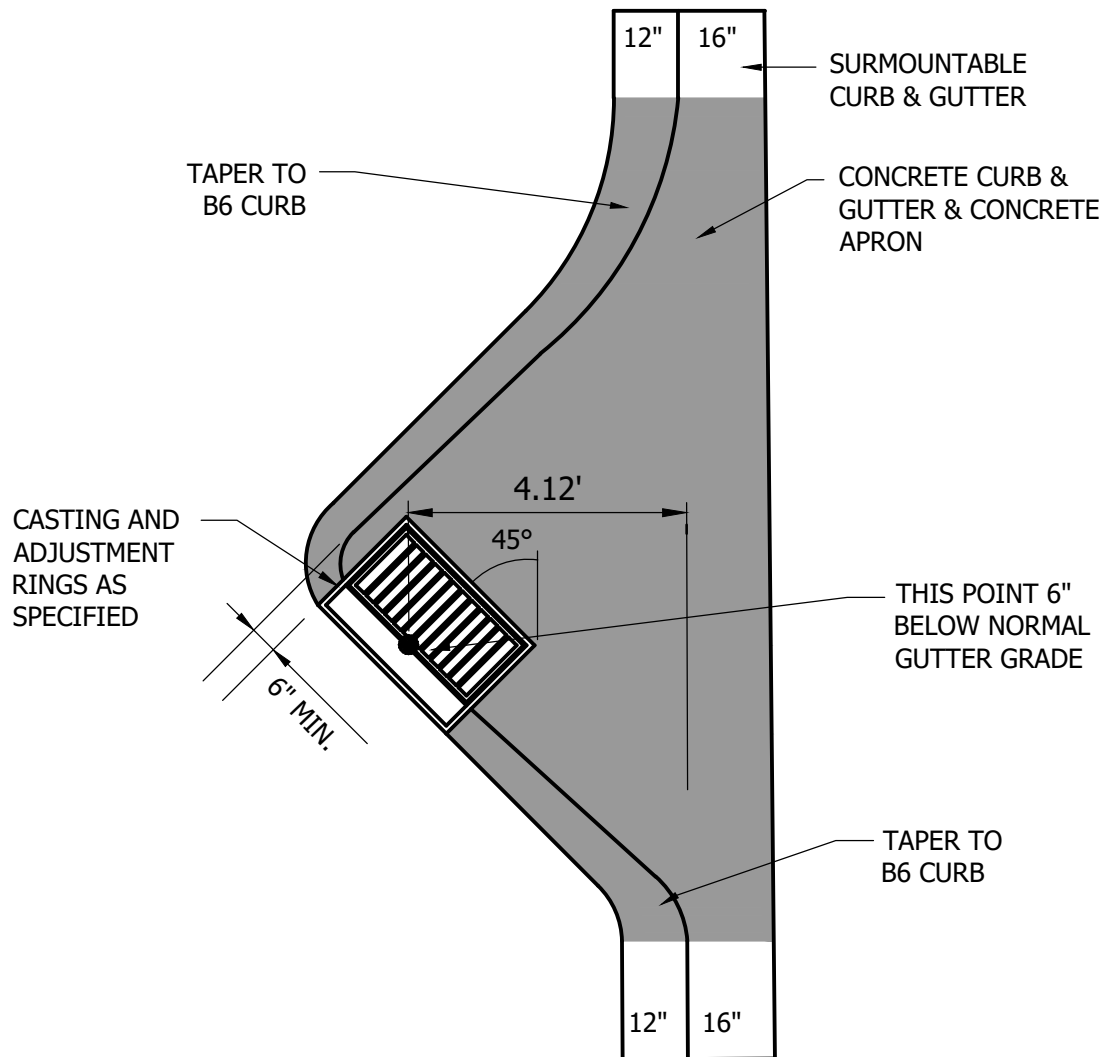




## CHOKER DETAIL

LAST REVISION:  
December 2018

PLATE NO.  
STR-39A



**NOTE:**  
APRON PAYMENT IS FOR SHADED AREA ONLY.

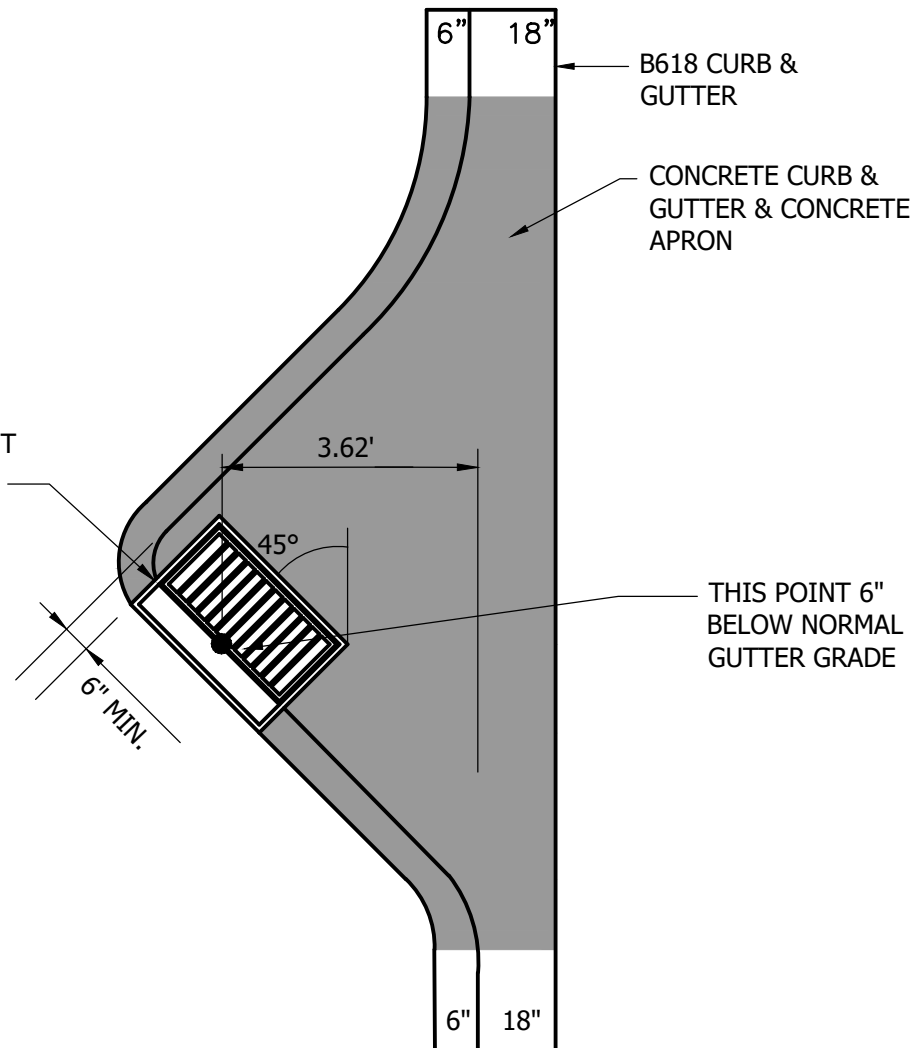


# HIGH CAPACITY CONCRETE APRON (SURMOUNTABLE CURB)

LAST REVISION:  
November 2019

PLATE NO.  
**STR-40**

CASTING AND ADJUSTMENT  
RINGS AS SPECIFIED



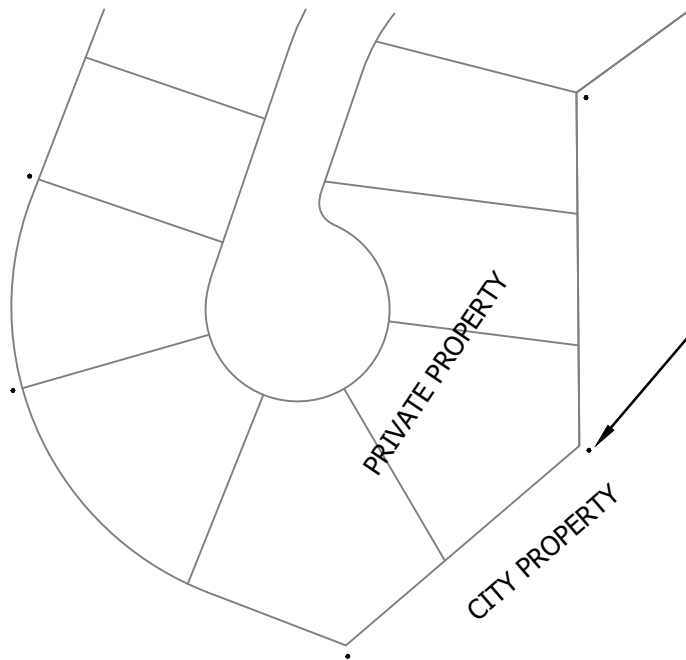
NOTE:  
APRON PAYMENT IS FOR SHADED AREA ONLY.



## HIGH CAPACITY CONCRETE APRON (B618 CURB)

LAST REVISION:  
November 2019

PLATE NO.  
**STR-41**



LOCATION OF MONUMENT -  
MAXIMUM 1'-2' FROM  
PROPERTY CORNER (TYP)

#### SPECIFICATIONS:

##### 1. MONUMENT

- CONSISTS OF A POST SET 2' BEHIND PROPERTY LINE
- POST TO HAVE THREE  $\frac{1}{4}$ " WIDE LINES ROUTED INTO TOP 0.5' OF POST, 0.12' SPACING

##### 2. LETTERING

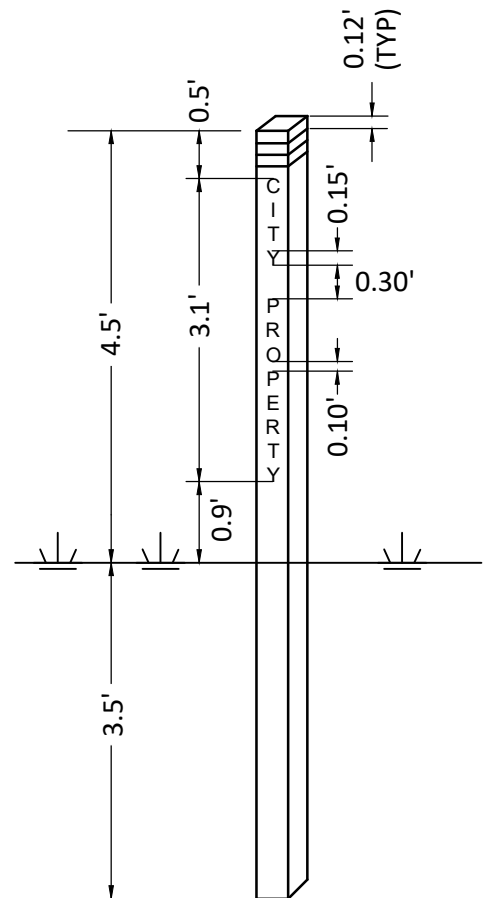
- "CITY PROPERTY" ENGRAVED INTO POST,  $\frac{1}{4}$ " DEPTH
- LETTERS TO BE AERIAL FONT, 0.15' TALL, 0.10' SPACING BETWEEN LETTERS, 0.30' SPACING BETWEEN WORDS
- START 0.5' FROM TOP OF POST

##### 2. POST MATERIALS

- 4"x4" SQUARE COMPOSITE POST WITH ROUNDED EDGES AND CORNERS
- 8' LONG
- DARK BROWN

##### 3. POST INSTALLATION

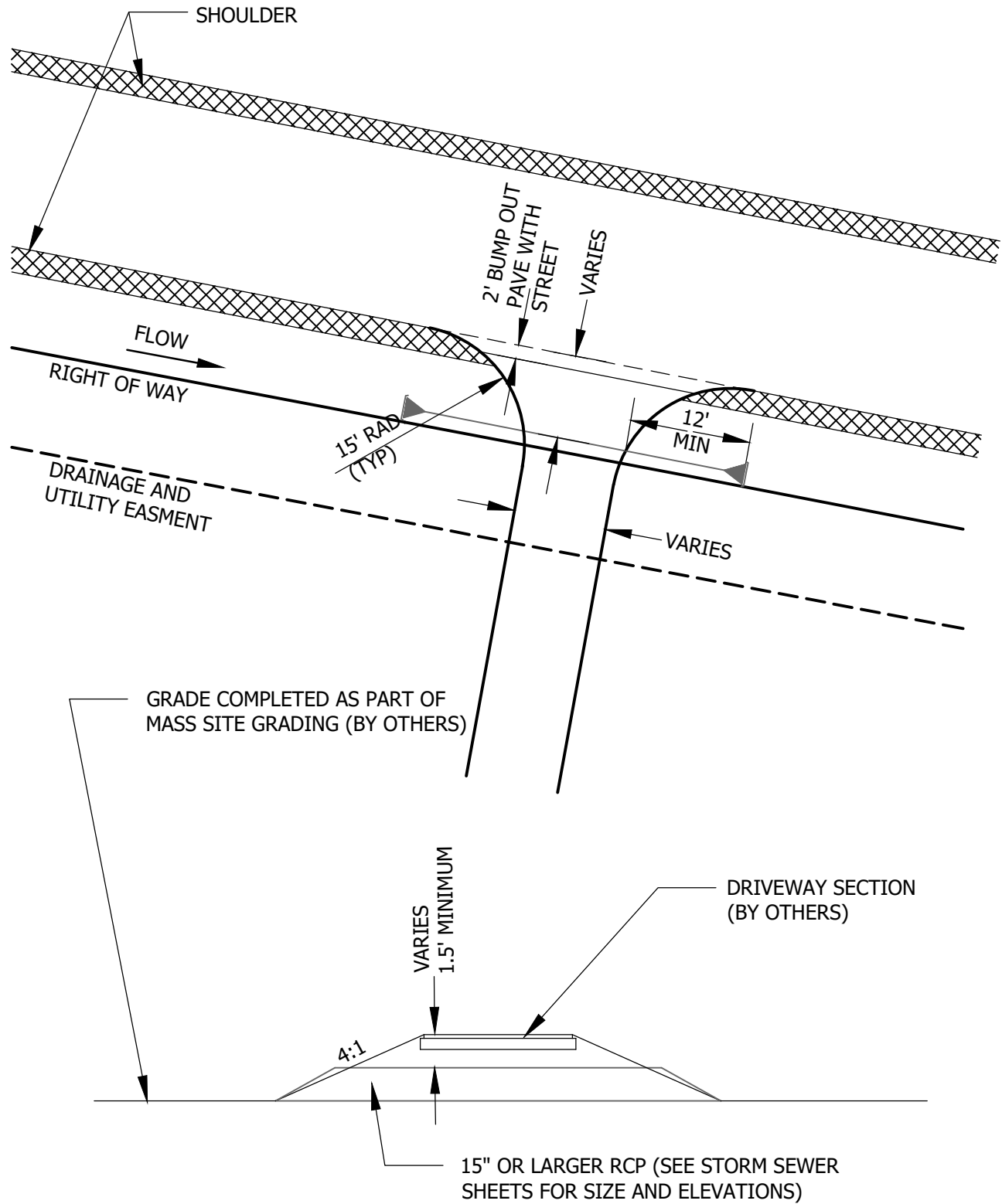
- MOUNTED TO A HEIGHT OF 4.5 FEET ABOVE GRADE
- SET 3.5 FEET IN THE GROUND
- PLACED WITH LETTERING FACING PRIVATE PROPERTY
- INSTALLED AS DIRECTED BY CITY ENGINEER



## CITY PROPERTY MONUMENT

LAST REVISION:  
April 2018

PLATE NO.  
STR-42



## RURAL ROADWAY DRIVEWAY CULVERT

LAST REVISION:  
January 2019

PLATE NO.  
**STR-43**

# INDEX

City  
Plate  
No.

## SECTION 7 - EROSION CONTROL

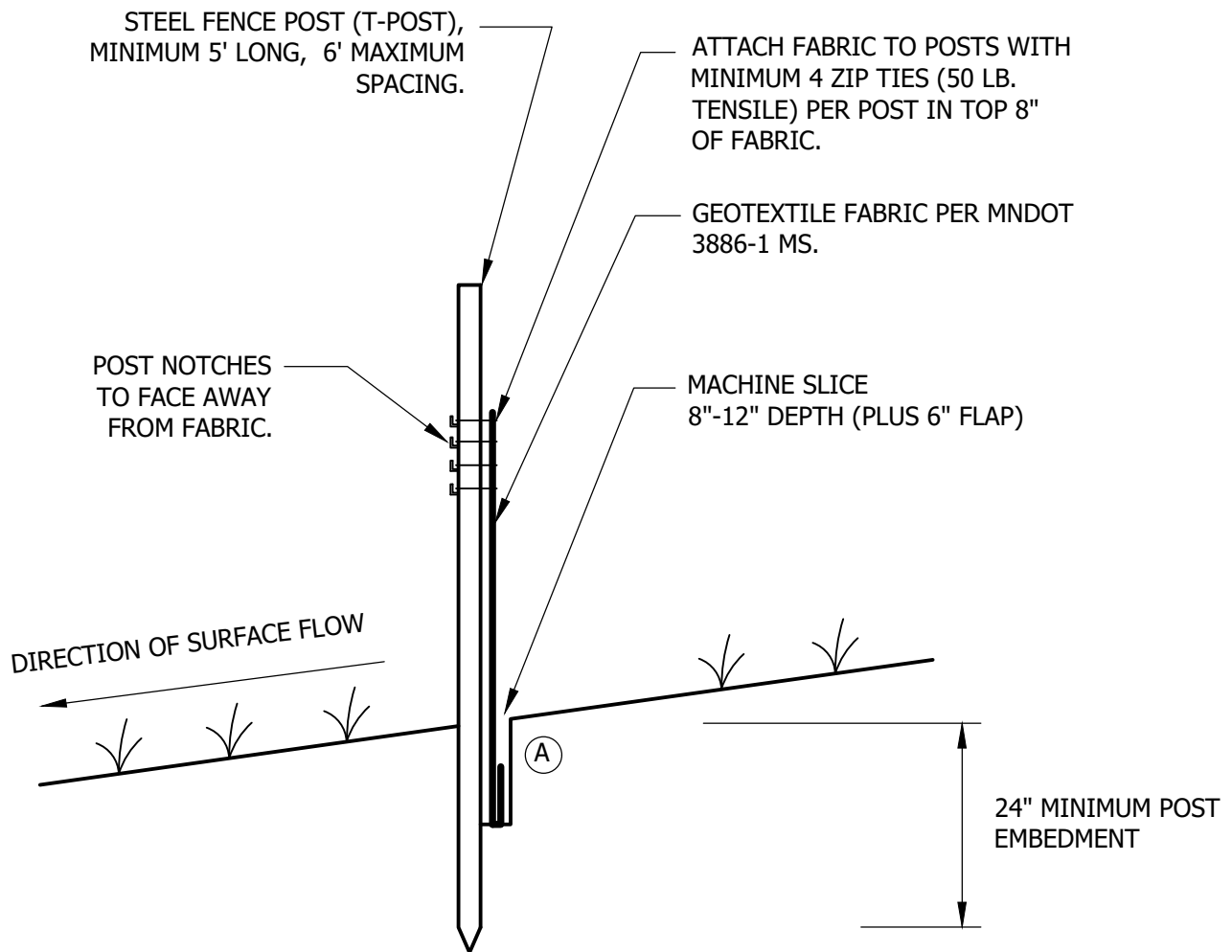
ERO-1A	SILT FENCE - MACHINE SLICED
ERO-1B	SILT FENCE - CURB PROTECTION
ERO-1C	SILT FENCE - STANDARD
ERO-1D	SILT FENCE - J-HOOK
ERO-2	EROSION CONTROL BLANKET INSTALLATION
ERO-3	FLOATING SILT CURTAIN
ERO-4A	INLET PROTECTION - SILT BOX FOR CATCH BASIN BEFORE ROAD CONSTRUCTION
ERO-4B	INLET PROTECTION - ROCK FILTER FOR CATCH BASIN DURING ROAD CONSTRUCTION
ERO-4C	INLET PROTECTION - CATCH BASIN INSERT AFTER PAVING
ERO-4D	INLET PROTECTION - SILT BOX FOR BEEHIVE CASTING
ERO-5A	DITCH CHECK / WEEPER - SIZING AND MATERIALS
ERO-5D	DITCH CHECK - TRIANGULAR SILT DIKE
ERO-5E	SEDIMENT CONTROL LOG DITCH CHECK
ERO-6B	PIPE CHECK - SEDIMENT CONTROL LOG WEIR OR ROCK WEIR
ERO-7	CONSTRUCTION ENTRANCE - ROCK OR WOOD / MULCH
ERO-8A	TEMPORARY SEDIMENTATION BASIN - PIPE OUTLET
ERO-8B	TEMPORARY SEDIMENTATION BASIN - STANDPIPE OUTLET
ERO-8C	TEMPORARY SEDIMENT TRAP / BASIN
ERO-8D	TEMPORARY SEDIMENT TRAP / BASIN - WITH RIP RAP
ERO-8E	TEMPORARY SEDIMENT TRAP / BASIN - ON FUTURE STREET SUBGRADE
ERO-10	DIVERSION MOUND AND TEMPORARY PIPE DOWN DRAIN
ERO-11	SLOPE TRACKING
ERO-12A	SUPER DUTY PERIMETER CONTROL - SILT FENCE / CONCRETE BARRIER SYSTEM
ERO-12C	PERIMETER / SEDIMENT CONTROL - HAY BALES



## SECTION 7 - EROSION CONTROL INDEX

LAST REVISION:  
January 2019

PLATE NO.



**NOTE:**

THE MACHINE SLICED METHOD (THIS DETAIL) IS THE STANDARD SILT FENCE INSTALLATION METHOD. CURB PROTECTION (ERO-1B) OR STANDARD (ERO-1C) SILT FENCE INSTALLATION METHODS SHOULD ONLY BE USED WHEN APPROVED OR DIRECTED BY THE CITY.

**(A) COMPACTION:**

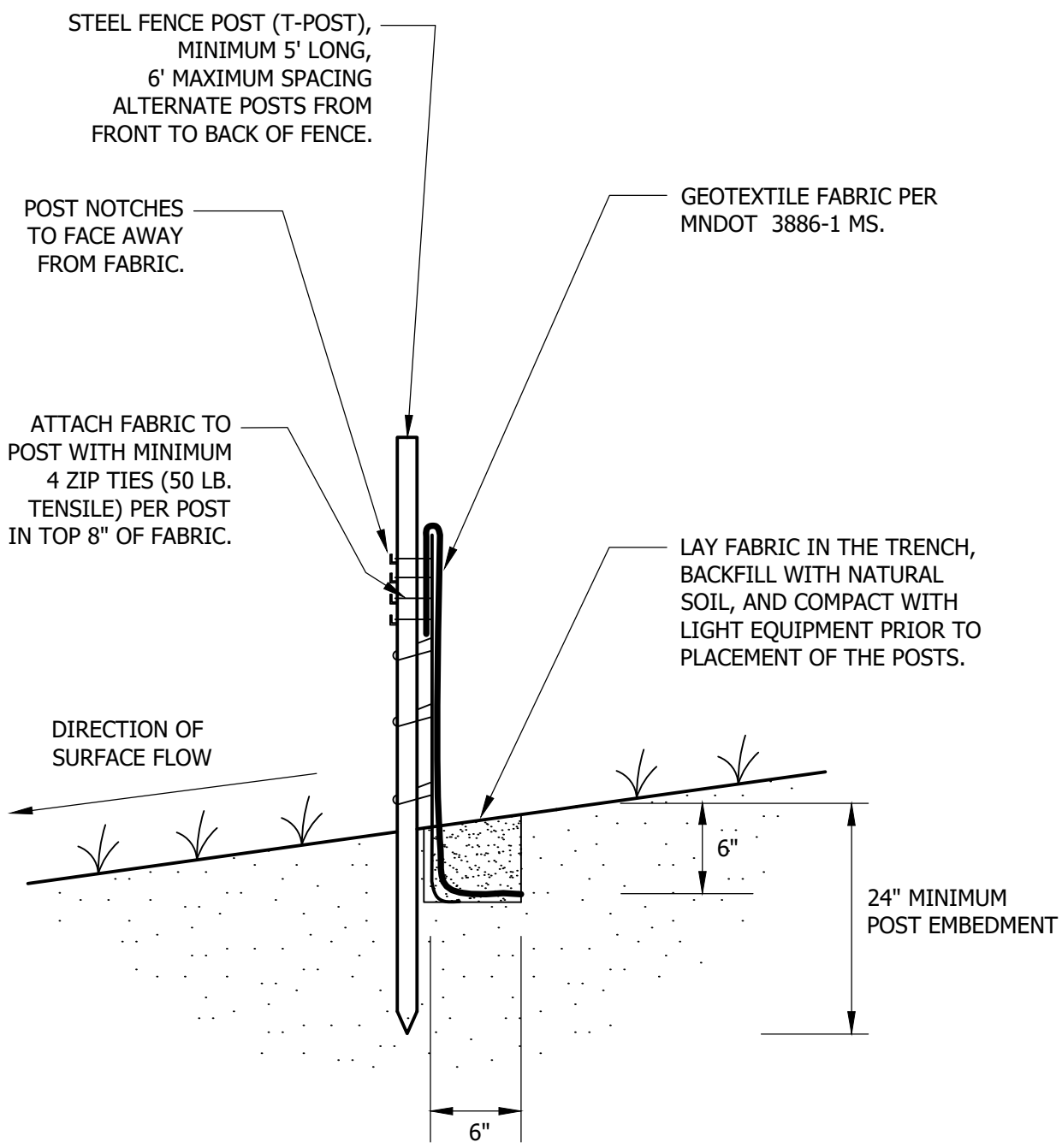
AFTER "SLICING" IN THE FABRIC AND *BEFORE* INSTALLATION OF STEEL POSTS, DRIVE INSTALLATION EQUIPMENT OVER THE "SLICE" WHILE FABRIC IS LAYING ON THE GROUND. *THEN* INSTALL STEEL POSTS AND PULL UP FABRIC TO ATTACH AT A UNIFORM HEIGHT.



**SILT FENCE  
MACHINE SLICED**

LAST REVISION:  
January 2019

PLATE NO.  
**ERO-1A**

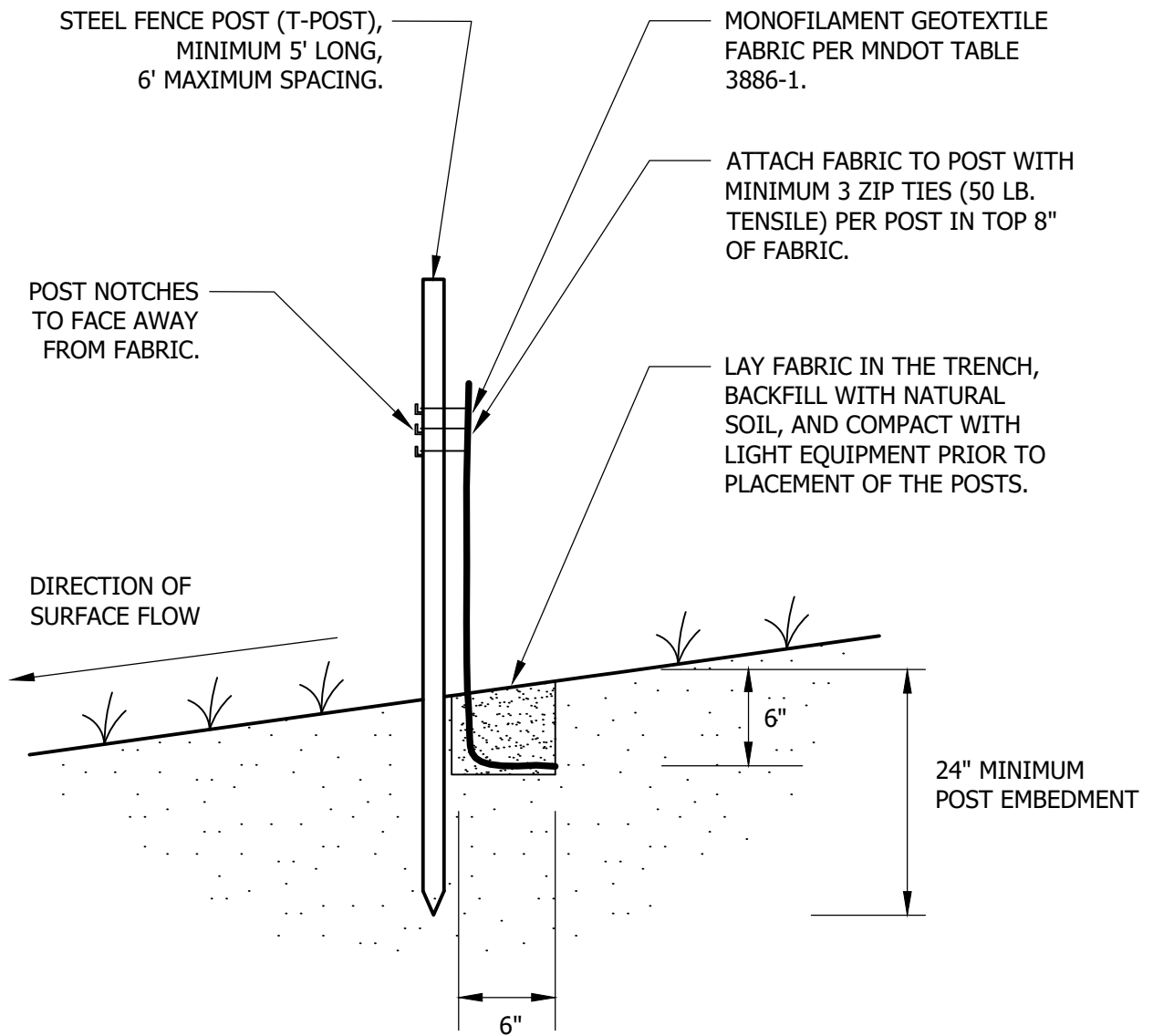


SILT FENCE  
CURB PROTECTION

LAST REVISION:  
January 2019

PLATE NO.  
ERO-1B





## SILT FENCE STANDARD

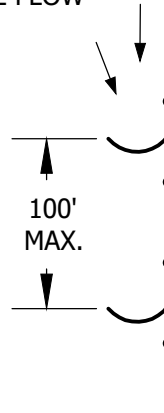
LAST REVISION:  
Mar. 2004

PLATE NO.  
ERO-1C

## PLAN VIEW

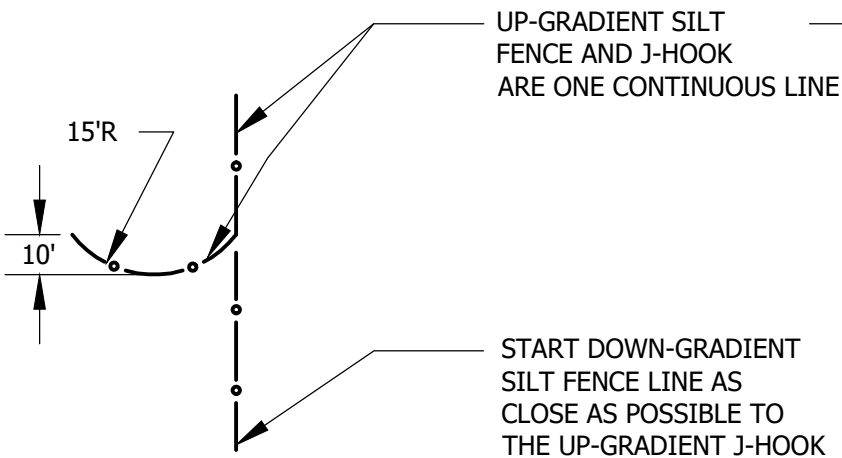
### I. SPACING REQUIREMENTS

DIRECTION OF  
SURFACE FLOW

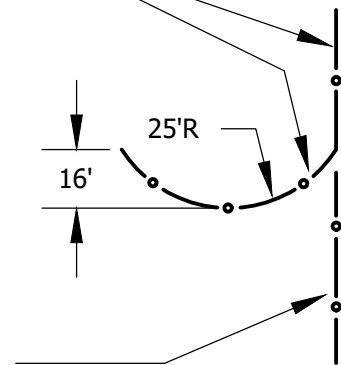


NOTE: SPACING DISTANCES  
WILL VARY, BUT ARE NOT  
TO EXCEED 100 FEET.

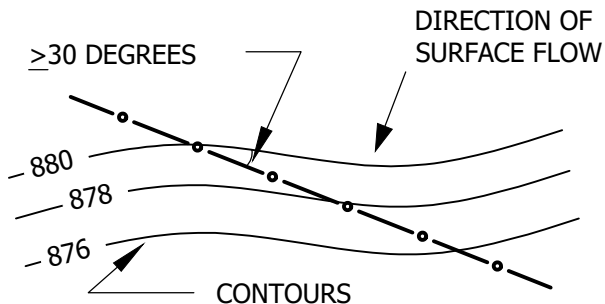
### II. SIZING REQUIREMENTS: J15, J25



J15 - FOR CATCHMENT  
AREA <0.25 ACRES



J25 - FOR CATCHMENT  
AREA ≥0.25 ACRES



NOTE:  
J-HOOKS SHALL BE USED WHEN  
THE SILT FENCE IS INSTALLED AT  
AN ANGLE OF 30 DEGREES OR  
GREATER FROM PARALLEL TO THE  
CONTOURS.



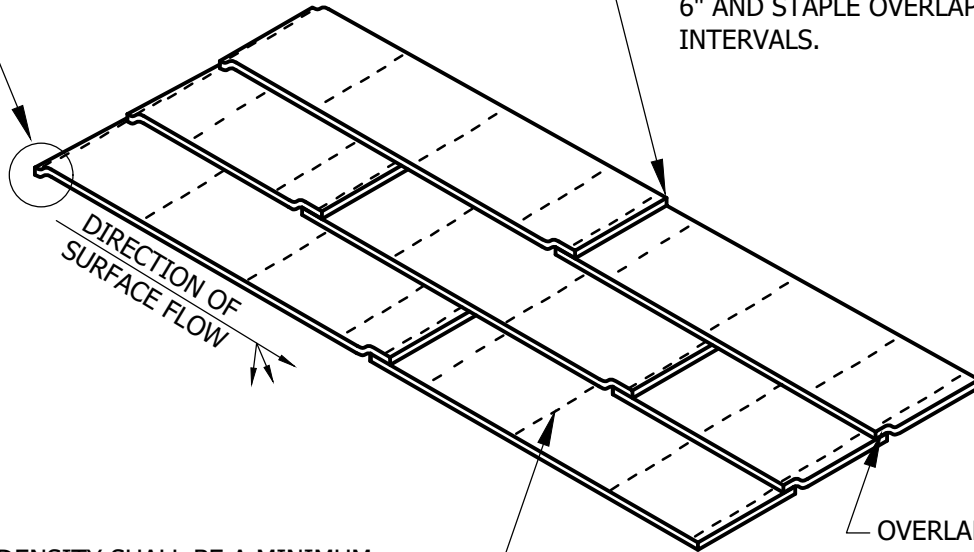
SILT FENCE  
J-HOOK

LAST REVISION:  
Mar. 2004

PLATE NO.  
ERO-1D

ANCHOR TRENCH  
(SEE DETAIL AND NOTES BELOW)

OVERLAP END JOINTS MINIMUM OF  
6" AND STAPLE OVERLAP AT 1.5'  
INTERVALS.

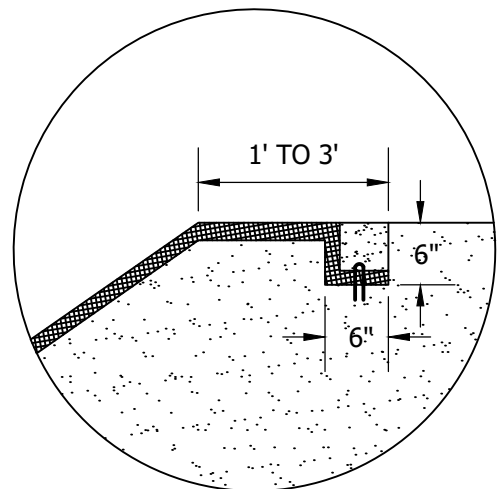


STAPLE DENSITY SHALL BE A MINIMUM  
OF 3 U-SHAPED 8",  
11 GAUGE METAL STAPLES PER SQUARE  
YARD (THIS MAY VARY AS DIRECTED BY  
THE CITY).

OVERLAP LONGITUDINAL  
JOINTS MINIMUM OF 6"

#### ANCHOR TRENCH

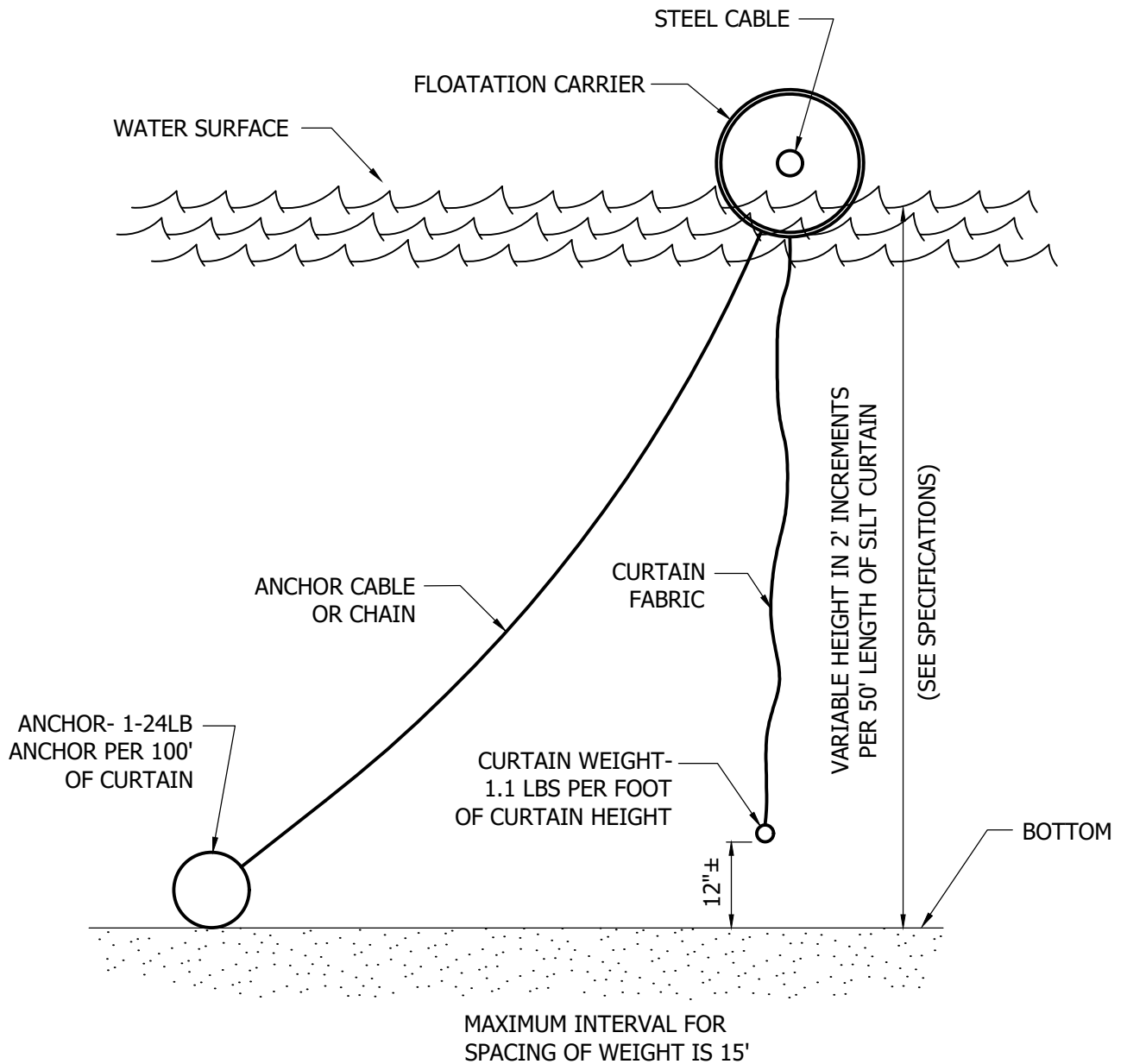
1. DIG 6" X 6" TRENCH
2. LAY BLANKET IN TRENCH
3. STAPLE AT 1.5' INTERVALS
4. BACKFILL WITH NATURAL SOIL AND COMPACT
5. BLANKET LENGTH SHALL NOT EXCEED 100' WITHOUT AN ANCHOR TRENCH



## EROSION CONTROL BLANKET INSTALLATION

LAST REVISION:  
Mar. 2004

PLATE NO.  
ERO-2



**NOTES:**

- DOUBLE SILT CURTAINS SHOULD BE SPACED 10' APART.
- CURTAIN LENGTH TO MATCH BOTTOM PROFILE AS CLOSELY AS POSSIBLE.



## FLOATING SILT CURTAIN

LAST REVISION:

Jan. 2005

PLATE NO.

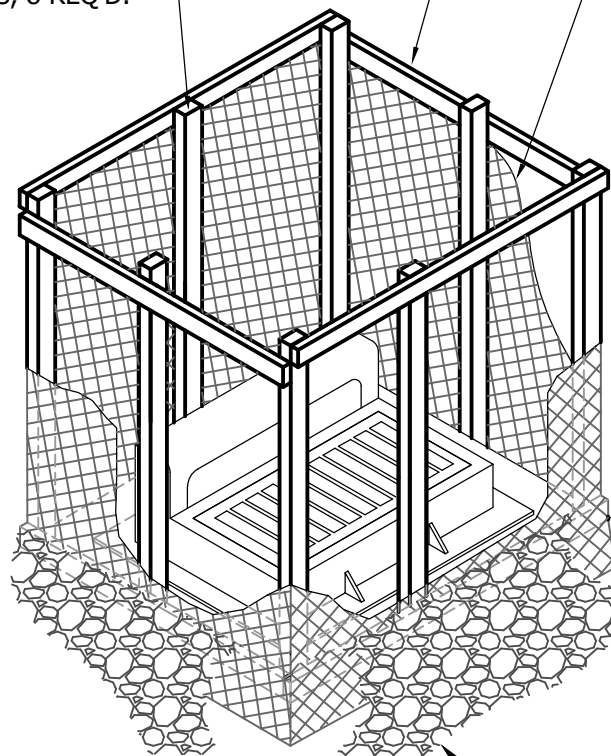
ERO-3

WOODEN LATH SHALL BE NAILED  
SECURELY TO THE POST MEMBER  
TO SECURE FILTER FABRIC.

2" X 4" HORIZONTAL MEMBERS  
CONTINUOUS AROUND TOP AND  
BOTTOM. FASTENED TO EACH POST  
USING 2-20D COMMON NAILS

2" X 4" X 2.5' LONG  
WOOD POSTS, 8 REQ'D.

MONOFILAMENT GEOTEXTILE  
FABRIC AS PER MNDOT TABLE  
3886-1 (MACHINE SLICED).  
ADDITIONAL 8-10" OF FABRIC  
FLAP AT BOTTOM OF BOX



2'-6"

8-10" FABRIC FLAP EXTENDING  
BEYOND BOTTOM 2"x4" - BURY  
UNDER ROCK TO PREVENT  
UNDERWASHING

1 1/2" WASHED ROCK  
1' DEEP X 1' WIDE

**NOTES:**

CONTRACTOR SHALL CONSTRUCT SILT BOX TO FIT  
AROUND THE INLET STRUCTURE WITH 6" MINIMUM  
CLEARANCE TO EDGES OF STRUCTURE. SILT BOX  
TO BE PLACED ON AN EVEN SURFACE 6" BELOW  
STRUCTURE OPENING. TOP OF SILT BOX TO  
EXTEND 18" MINIMUM ABOVE EXISTING GRADE.

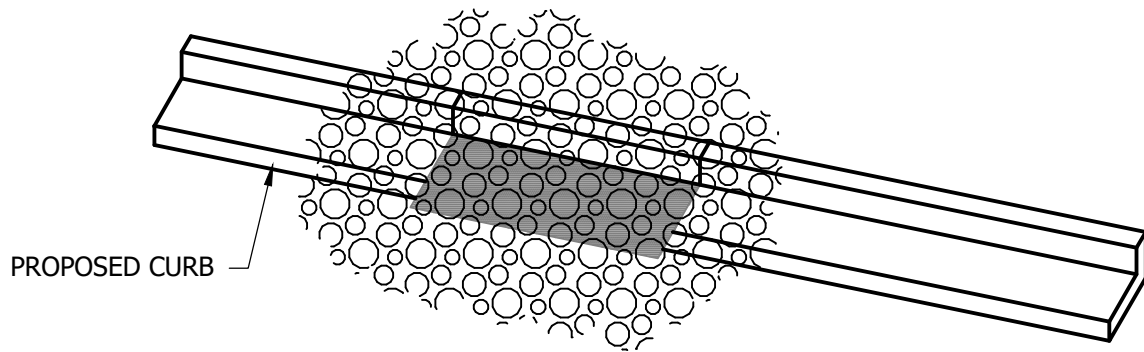


**INLET PROTECTION  
SILT BOX FOR CATCH BASIN  
BEFORE ROAD CONSTRUCTION**

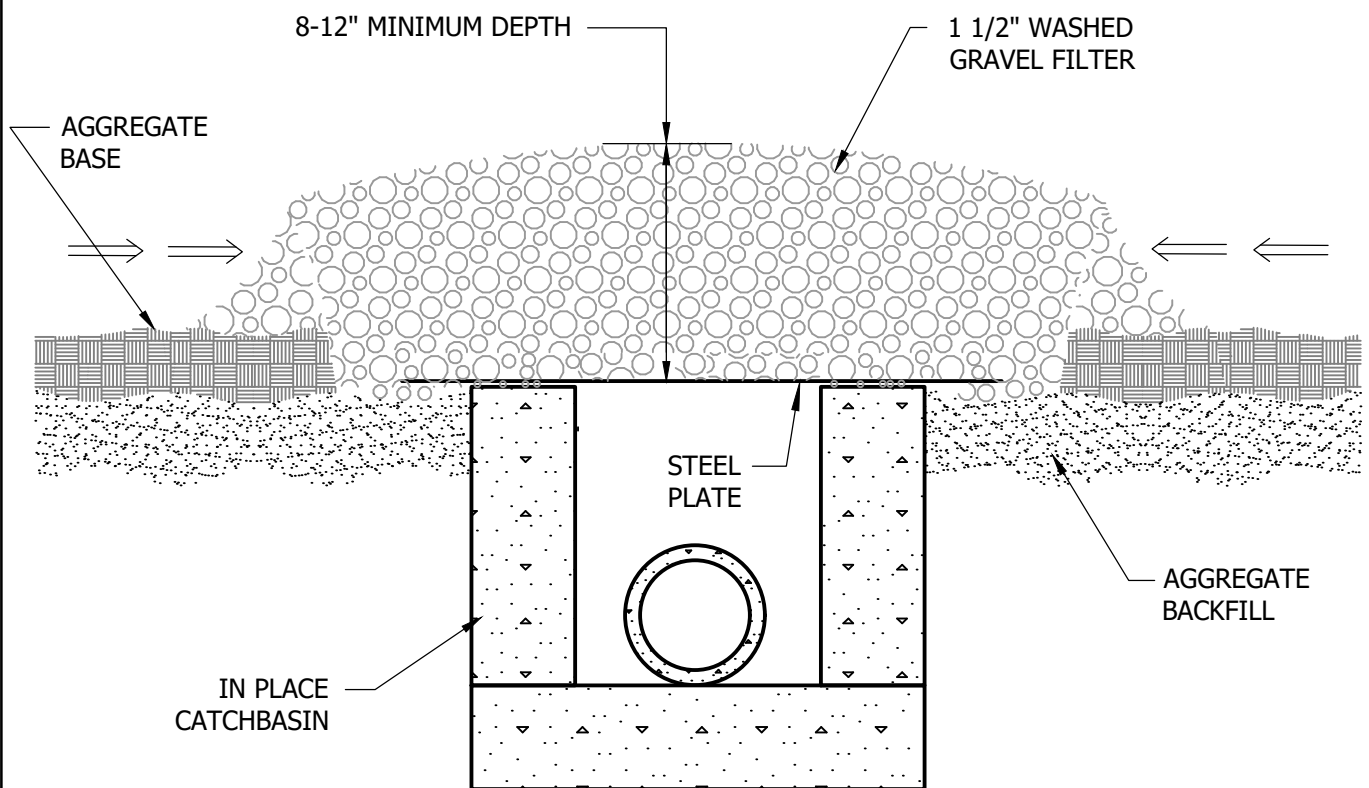
LAST REVISION:  
Jan. 2005

PLATE NO.  
**ERO-4A**

## PLAN



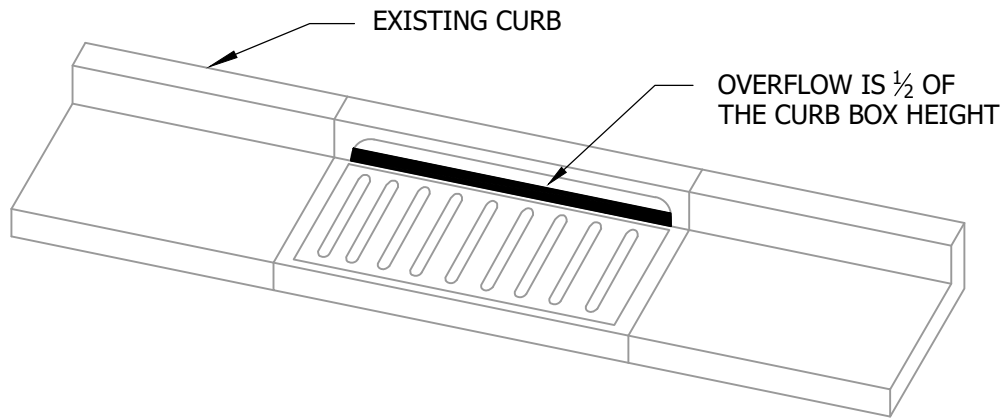
← = DIRECTION OF SURFACE FLOW



### INLET PROTECTION ROCK FILTER FOR CATCH BASIN DURING ROAD CONSTRUCTION

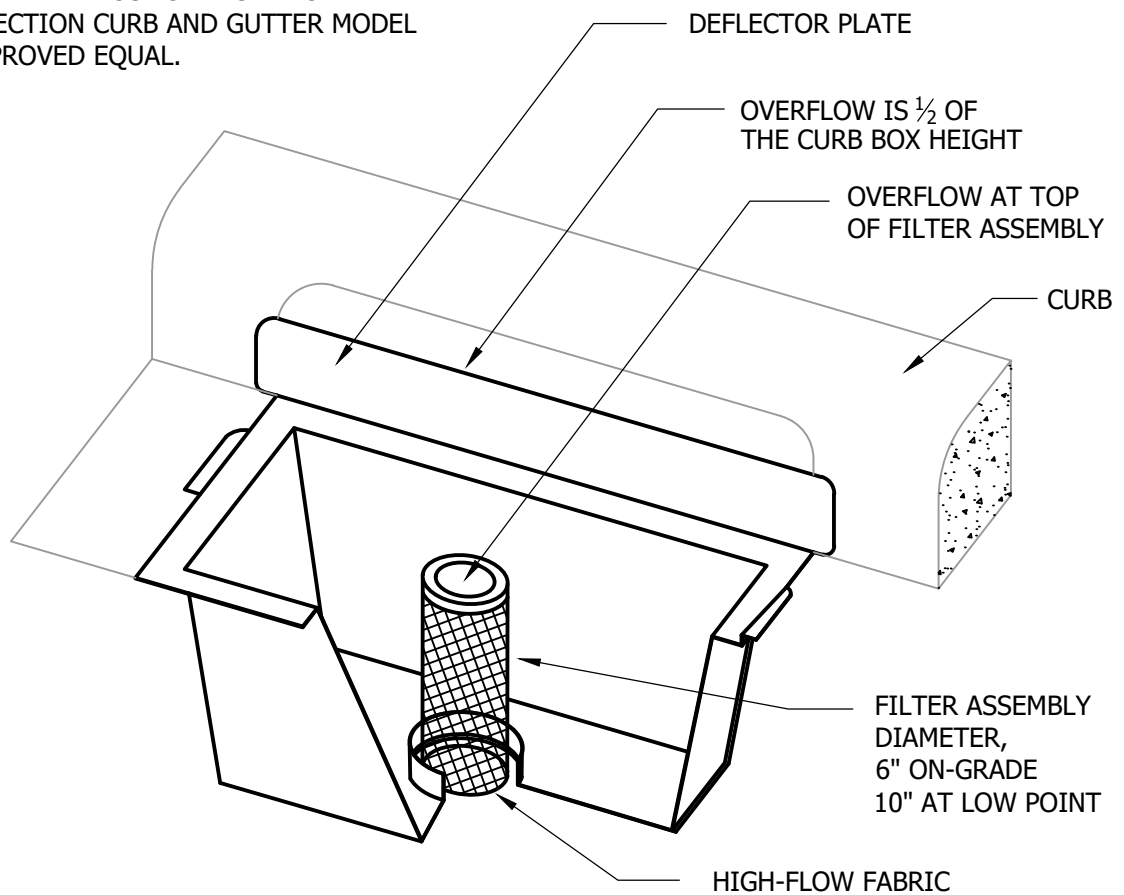
LAST REVISION:  
Mar. 2004

PLATE NO.  
ERO-4B



## PLAN

WIMCO ROAD DRAIN CG-23\* HIGH FLOW  
INLET PROTECTION CURB AND GUTTER MODEL  
OR CITY APPROVED EQUAL.



\* FOR THE NEW R-3290-VB STANDARD CASTING,  
INSTALL WIMCO ROAD DRAIN  
CG-3290 OR CITY APPROVED EQUAL.



## INLET PROTECTION CATCH BASIN INSERT AFTER PAVING

LAST REVISION:  
Jan. 2005

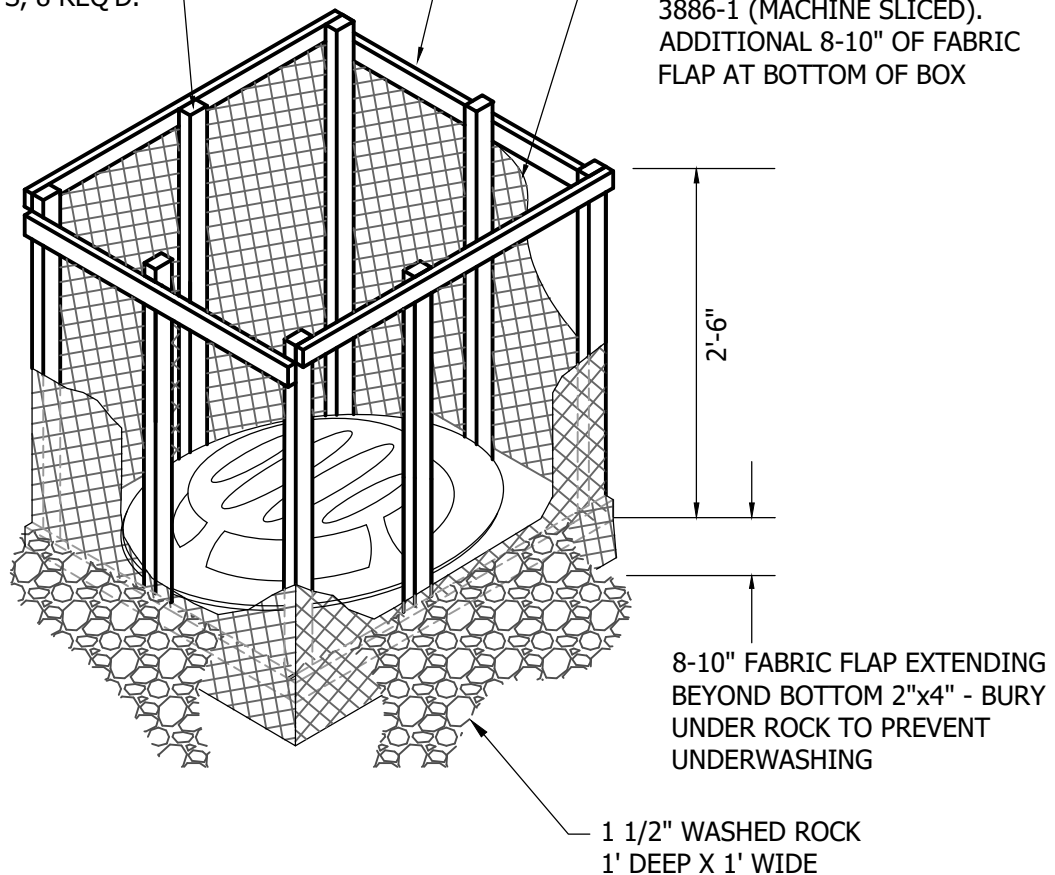
PLATE NO.  
ERO-4C

WOODEN LATH SHALL BE NAILED  
SECURELY TO THE POST MEMBER  
TO SECURE FILTER FABRIC.

2" X 4" HORIZONTAL MEMBERS  
CONTINUOUS AROUND TOP AND  
BOTTOM. FASTENED TO EACH POST  
USING 2-20D COMMON NAILS

2" X 4" X 2.5' LONG  
WOOD POSTS, 8 REQ'D.

MONOFILAMENT GEOTEXTILE  
FABRIC AS PER MNDOT TABLE  
3886-1 (MACHINE SLICED).  
ADDITIONAL 8-10" OF FABRIC  
FLAP AT BOTTOM OF BOX



**NOTES:**  
CONTRACTOR SHALL CONSTRUCT SILT BOX TO FIT  
AROUND THE INLET STRUCTURE WITH 6" MINIMUM  
CLEARANCE TO EDGES OF STRUCTURE. SILT BOX  
TO BE PLACED ON AN EVEN SURFACE 6" BELOW  
STRUCTURE OPENING. TOP OF SILT BOX TO  
EXTEND 18" MINIMUM ABOVE EXISTING GRADE.



## INLET PROTECTION SILT BOX FOR BEEHIVE CASTING

LAST REVISION:  
Jan. 2005

PLATE NO.  
ERO-4D



6" X 6" TRENCH WITH LEADING EDGE  
OF TYPE IV GEOTEXTILE FABRIC  
STAPLED AT 1' INTERVALS AND  
BACKFILLED WITH NATURAL SOIL

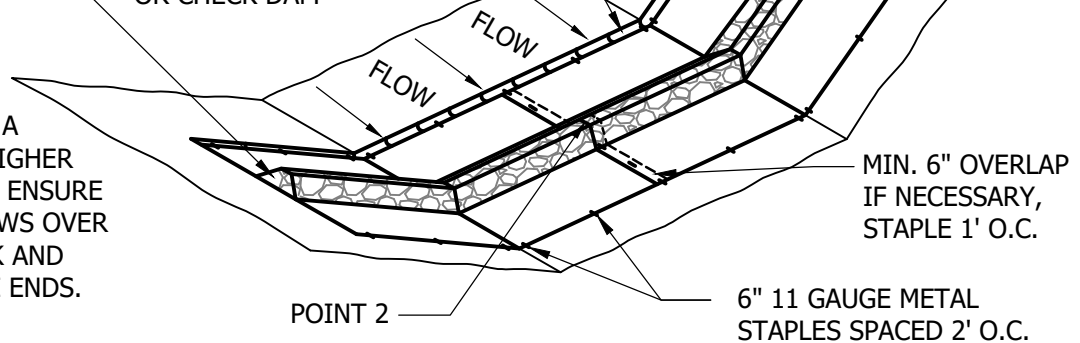
MnDOT 3733  
GEOTEXTILE  
FABRIC

POINT 1

DITCH CHECK  
ROCK/BIO WEEPER  
OR CHECK DAM

**NOTE:**

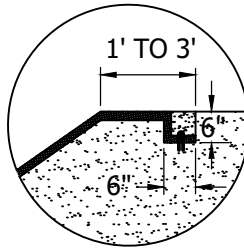
POINT 1 MUST BE A  
MINIMUM OF 6" HIGHER  
THAN POINT 2 TO ENSURE  
THAT WATER FLOWS OVER  
THE DITCH CHECK AND  
NOT AROUND THE ENDS.



	HEIGHT (INCHES)	WIDTH (INCHES)	MATERIAL
SMALL CHECK	24	12 - 18	MnDOT 3601 CLASS II RIP RAP
LARGE CHECK	36	24 - 30	MnDOT 3601 CLASS III RIP RAP
ROCK WEEPER	18	6 - 12	MnDOT 3882 TYPE 9 MULCH (1 1/2" WASHED ROCK)

**ANCHOR TRENCH**

1. DIG 6" X 6" TRENCH
2. LAY BLANKET IN TRENCH
3. STAPLE AT 1.5' INTERVALS
4. BACKFILL WITH NATURAL SOIL AND COMPACT



MATERIALS  
(SEE TABLE)

WIDTH  
(SEE TABLE)

DIRECTION OF  
SURFACE FLOW

≥1.5

HEIGHT  
(SEE TABLE)

TYPE IV GEOTEXTILE FABRIC ANCHORED  
IN 6" X 6" TRENCH WITH 6", 11 GAUGE  
METAL STAPLES AT 1' INTERVALS

STAPLE DOWNSTREAM  
SIDE OF FABRIC AT 2' INTERVALS



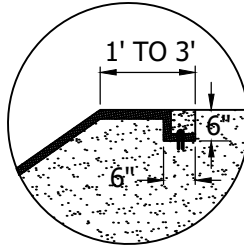
**ROCK DITCH CHECK / WEEPER  
SIZING & MATERIALS**

LAST REVISION:  
March 2008

PLATE NO.  
ERO-5A

#### ANCHOR TRENCH

1. DIG 6" X 6" TRENCH
2. LAY BLANKET IN TRENCH
3. STAPLE AT 1.5' INTERVALS
4. BACKFILL WITH NATURAL SOIL AND COMPACT

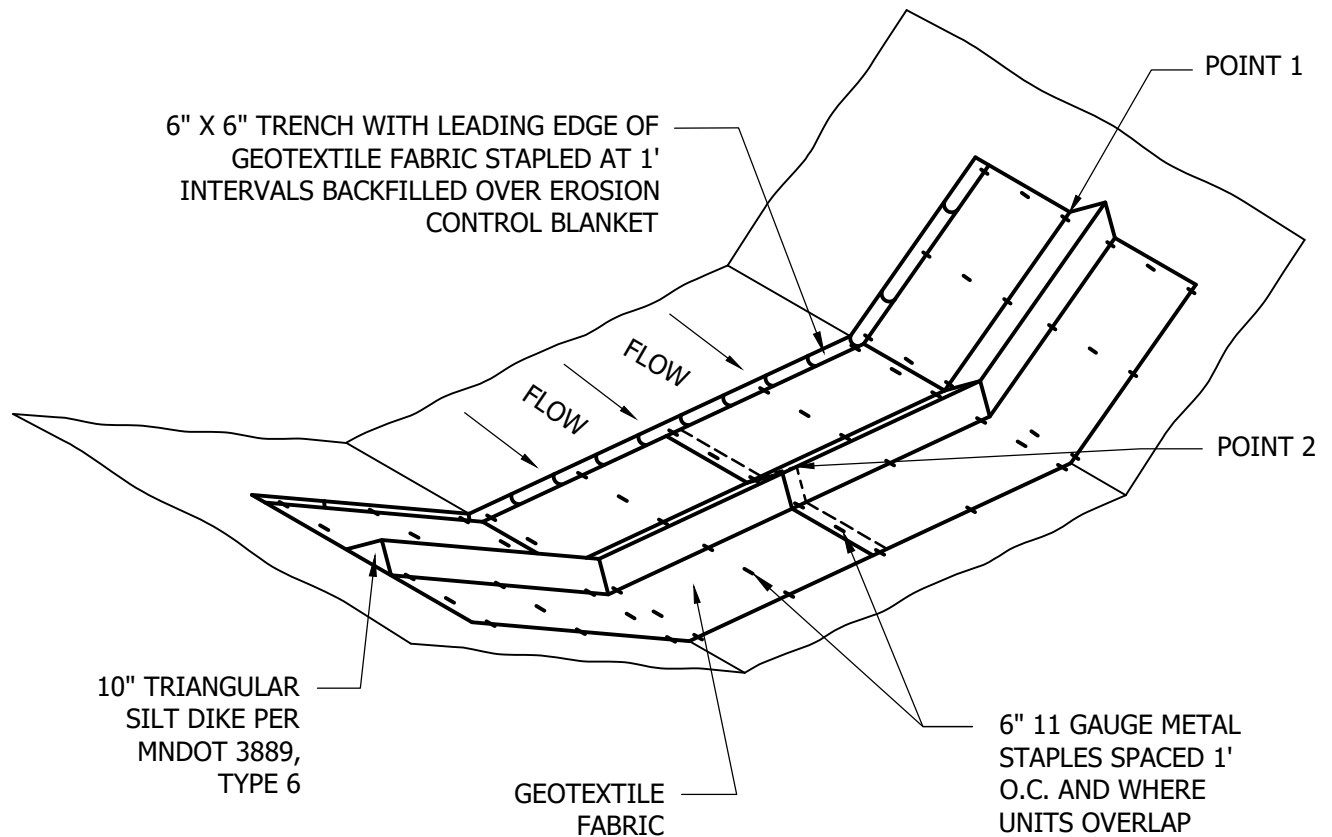


#### NOTE:

STAPLE DENSITY SHALL CONFORM TO MANUFACTURERS SPECIFICATIONS.

#### NOTE:

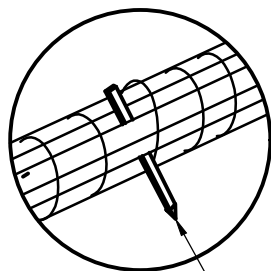
POINT 1 MUST BE A MINIMUM OF 6" HIGHER THAN POINT 2 TO ENSURE THAT WATER FLOWS OVER THE DIKE AND NOT AROUND THE ENDS.



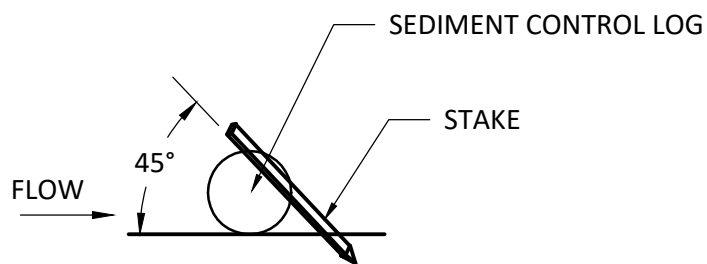
## DITCH CHECK TRIANGULAR SILT DIKE

LAST REVISION:  
March 2008

PLATE NO.  
ERO-5D



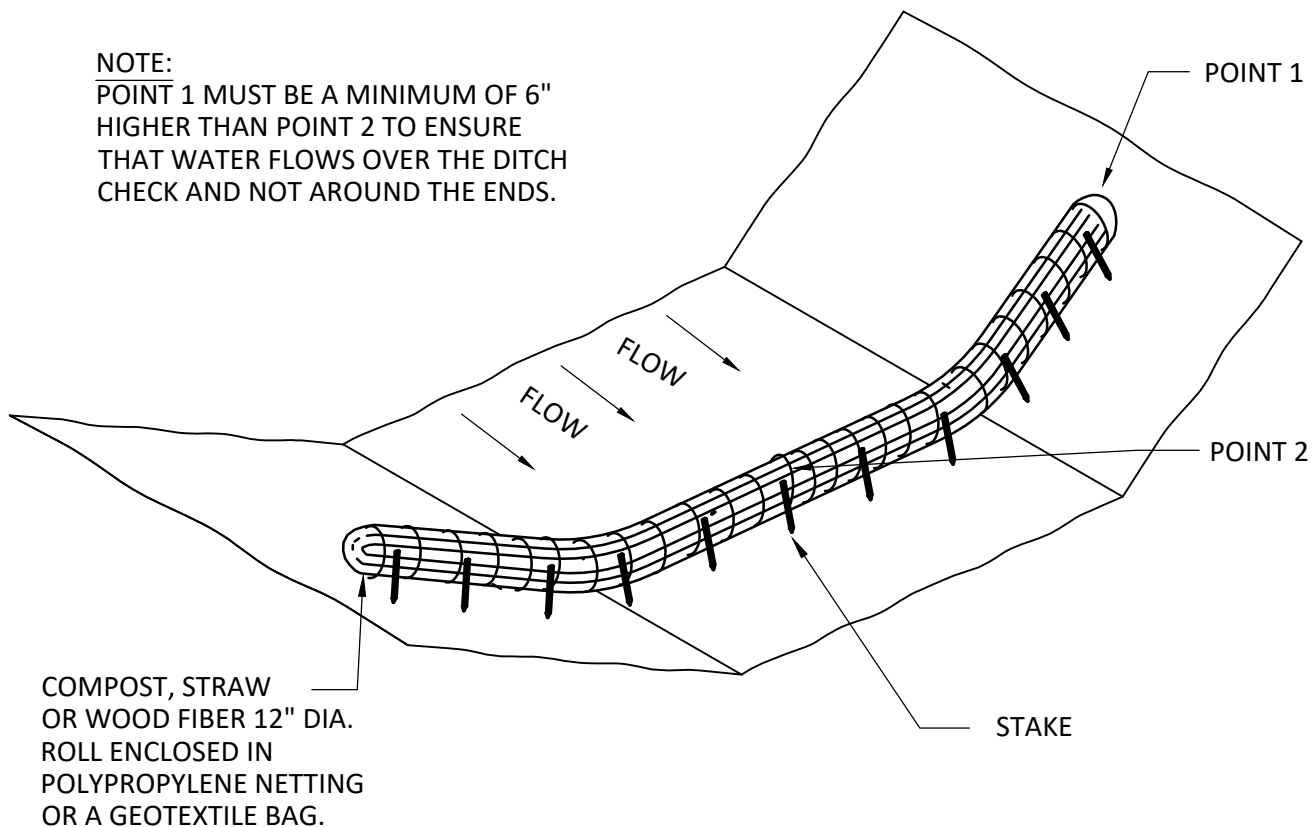
STAKE



2" x 2" x 16" LONG WOODEN STAKES AT 1'-0" SPACING MINIMUM. STAKES SHALL BE DRIVEN THROUGH THE BACK HALF OF THE SEDIMENT CONTROL LOG AT AN ANGLE OF 45° WITH THE TOP OF THE STAKE POINTING UPSTREAM.

**NOTE:**

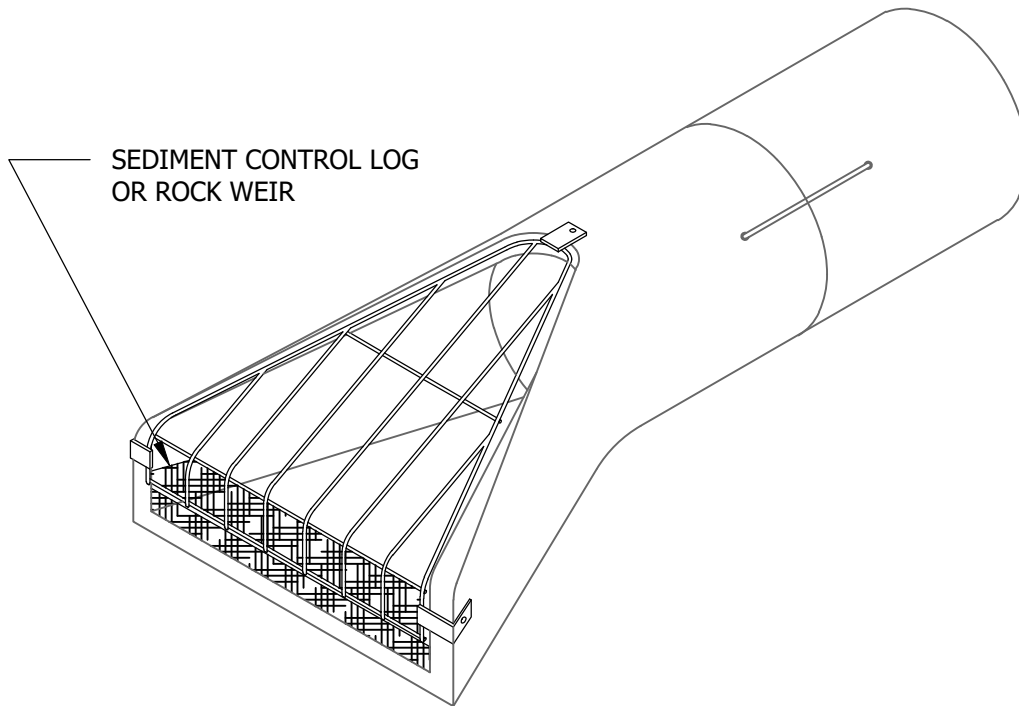
POINT 1 MUST BE A MINIMUM OF 6" HIGHER THAN POINT 2 TO ENSURE THAT WATER FLOWS OVER THE DITCH CHECK AND NOT AROUND THE ENDS.



## SEDIMENT CONTROL LOG DITCH CHECK

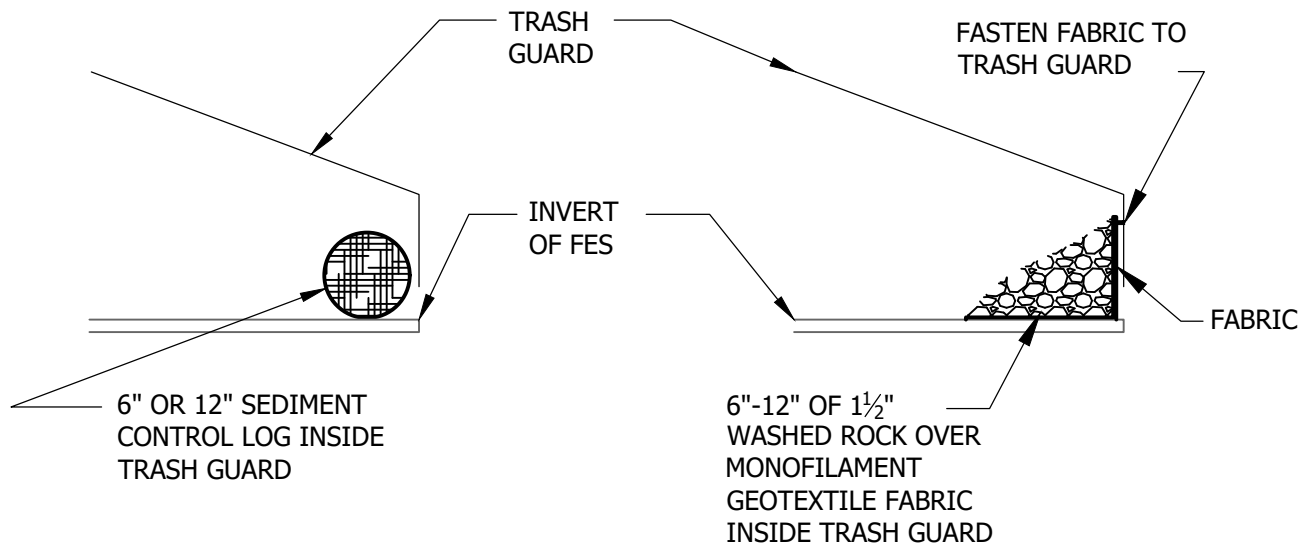
LAST REVISION:  
November 2017

PLATE NO.  
ERO-5E



SEDIMENT CONTROL LOG WEIR

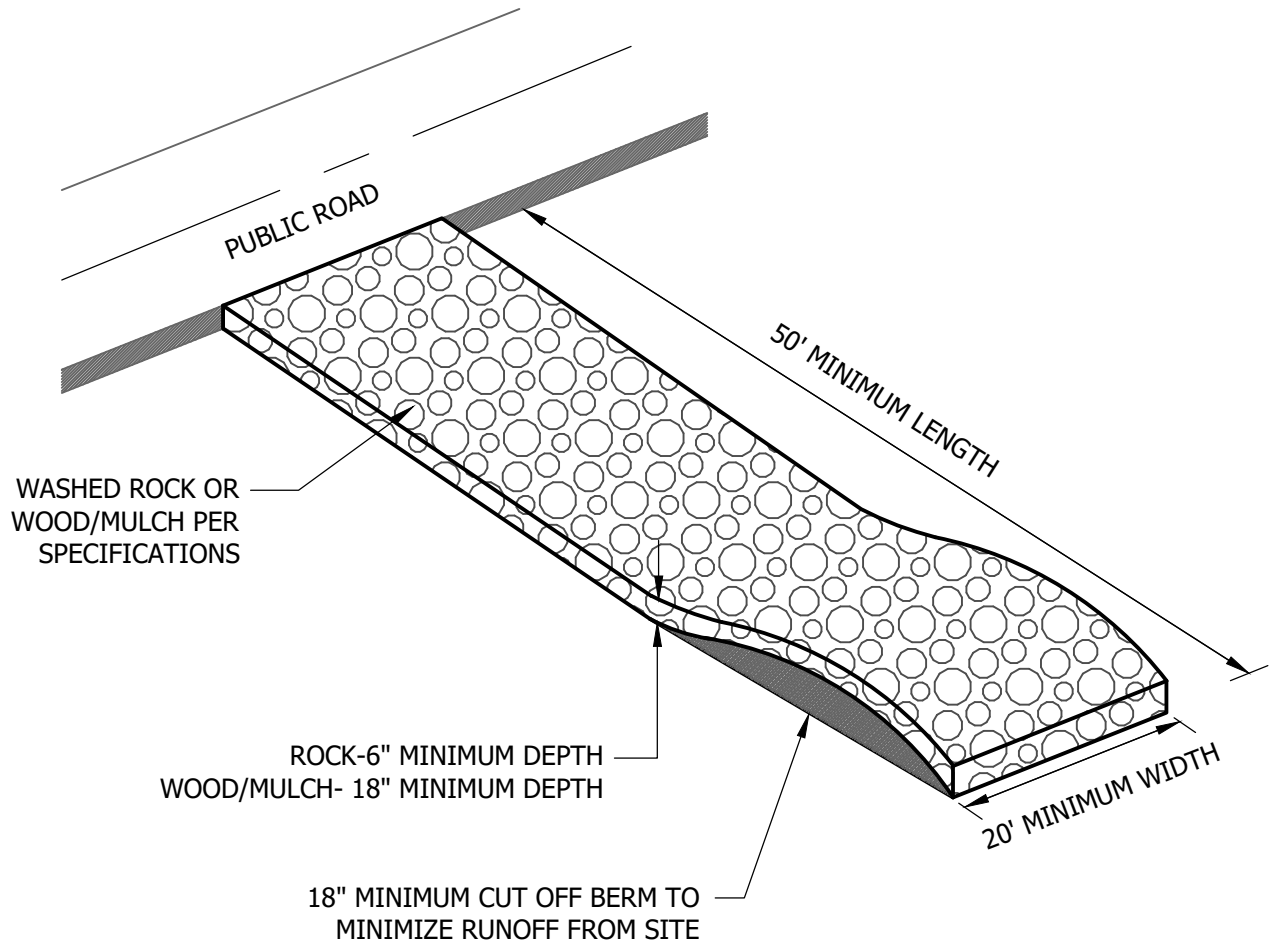
ROCK WEIR



PIPE CHECK -  
SEDIMENT CONTROL LOG WEIR  
OR ROCK WEIR

LAST REVISION:  
November 2017

PLATE NO.  
ERO-6B



**NOTES:**

1. FILTER FABRIC SHALL BE PLACED UNDER ROCK OR MULCH TO STOP MUD MIGRATION THROUGH MATERIAL.
2. ENTRANCE MUST BE MAINTAINED REGULARLY TO PREVENT SEDIMENTATION ON PUBLIC ROADWAYS. FUGITIVE ROCK OR MULCH WILL BE REMOVED FROM ADJACENT ROADWAYS DAILY OR MORE FREQUENTLY AS NECESSARY.

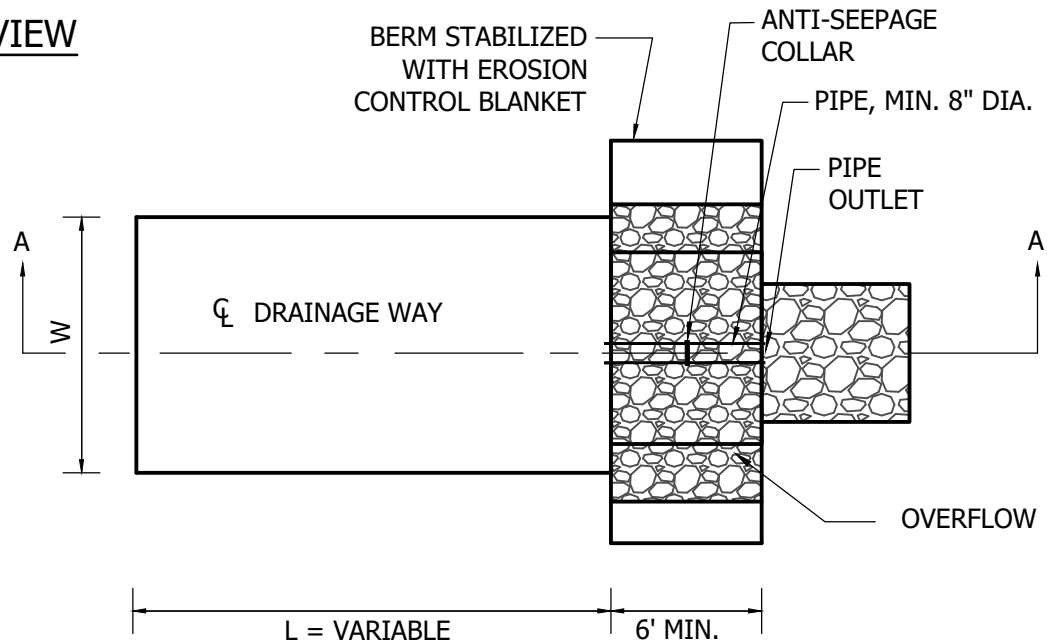


**CONSTRUCTION ENTRANCE -  
ROCK OR WOOD / MULCH**

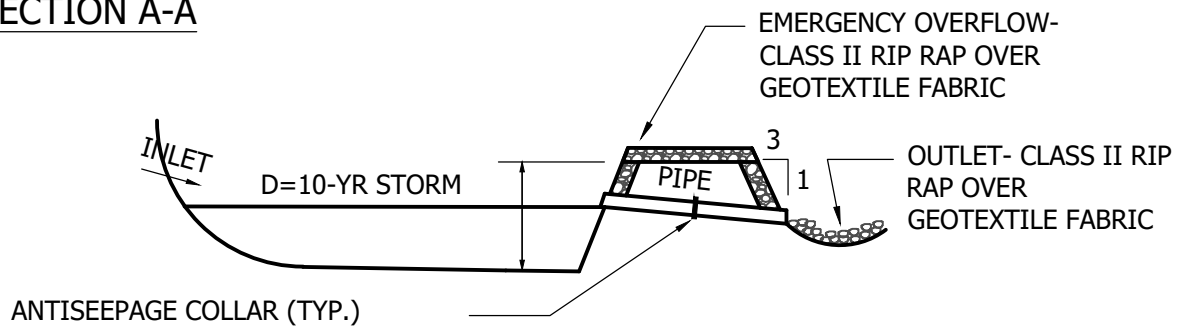
LAST REVISION:  
April 2007

PLATE NO.  
**ERO-7**

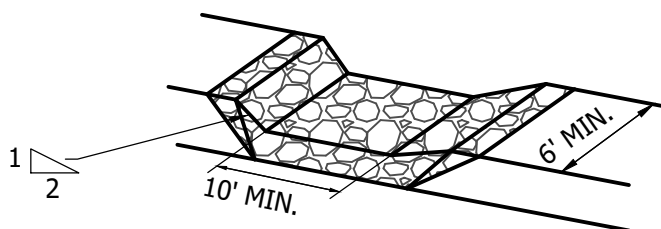
## I. PLAN VIEW



## II. SECTION A-A



## III. BASIN EMERGENCY OVERFLOW



### NOTES:

BASIN USED FOR 10 ACRES DRAINAGE AREA OR MORE. DESIGN RUNOFF VOLUME IS FROM A 2-YR, 24-HR STORM PER ACRE DRAINED TO THE BASIN. BASIN VOLUME MUST BE A MIN. OF 1800 CUBIC FEET/ACRE. SEE PLANS/SPECIFICATIONS FOR BASIN DIMENSIONS AND PIPE SIZE AND SLOPE.



## TEMPORARY SEDIMENTATION BASIN PIPE OUTLET

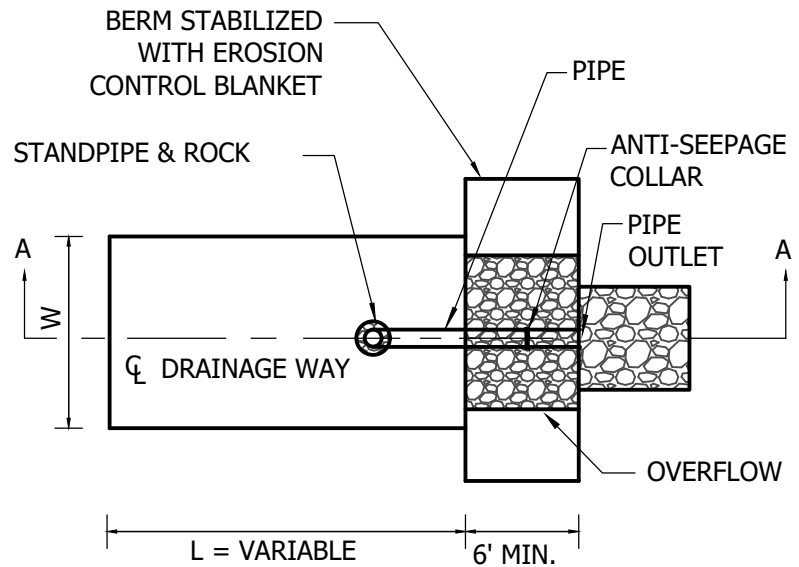
LAST REVISION:  
Jan. 2005

PLATE NO.  
ERO-8A

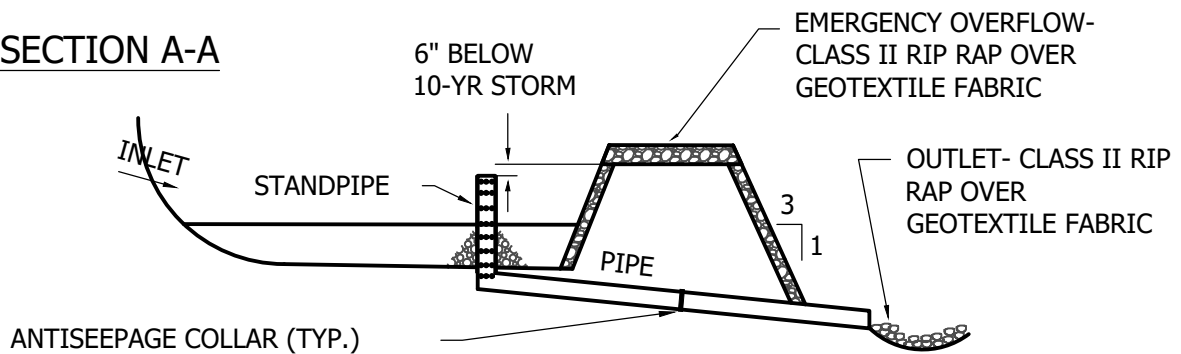
## I. PLAN VIEW

### NOTES:

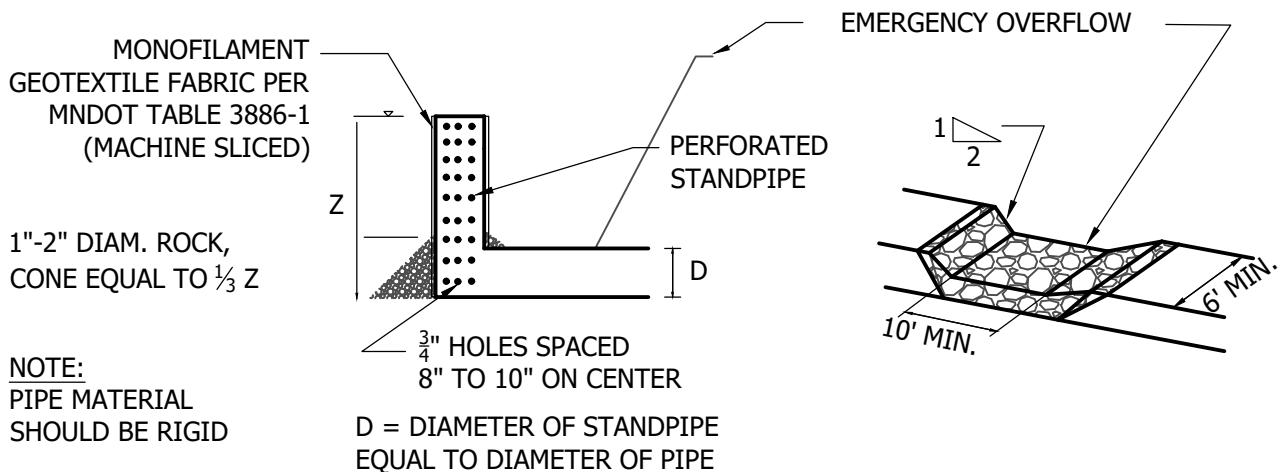
BASIN USED FOR 10 ACRES DRAINAGE AREA OR MORE. DESIGN RUNOFF VOLUME IS FROM A 2-YR, 24-HR STORM PER ACRE DRAINED TO THE BASIN. BASIN VOLUME MUST BE A MIN. OF 1800 CUBIC FEET/ACRE. SEE PLANS/SPECIFICATIONS FOR BASIN DIMENSIONS AND PIPE SIZE AND SLOPE.



## II. SECTION A-A



## III. BASIN STANDPIPE AND EMERGENCY OVERFLOW

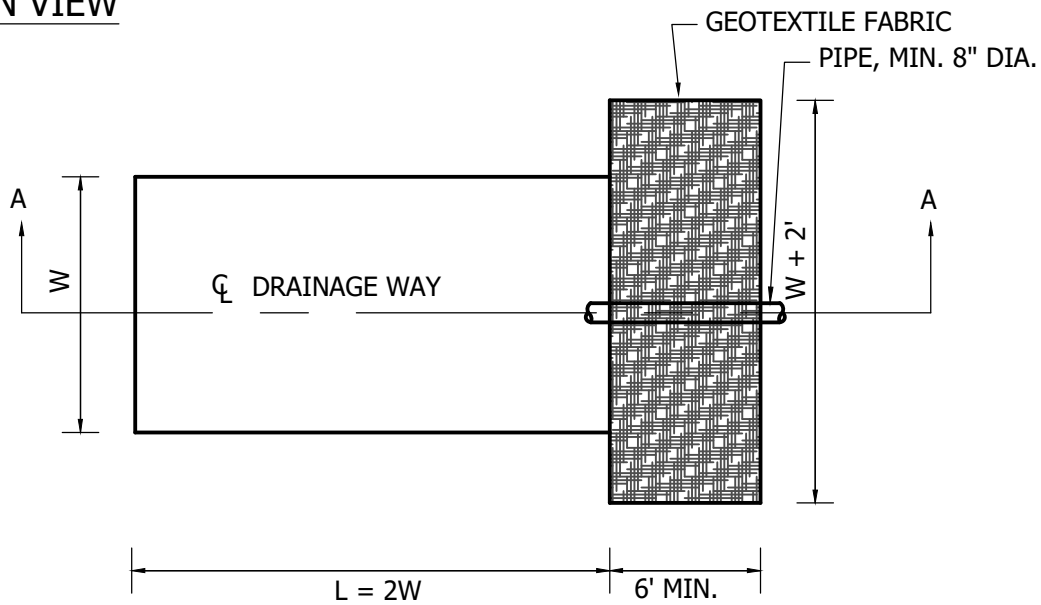


## TEMPORARY SEDIMENTATION BASIN STANDPIPE OUTLET

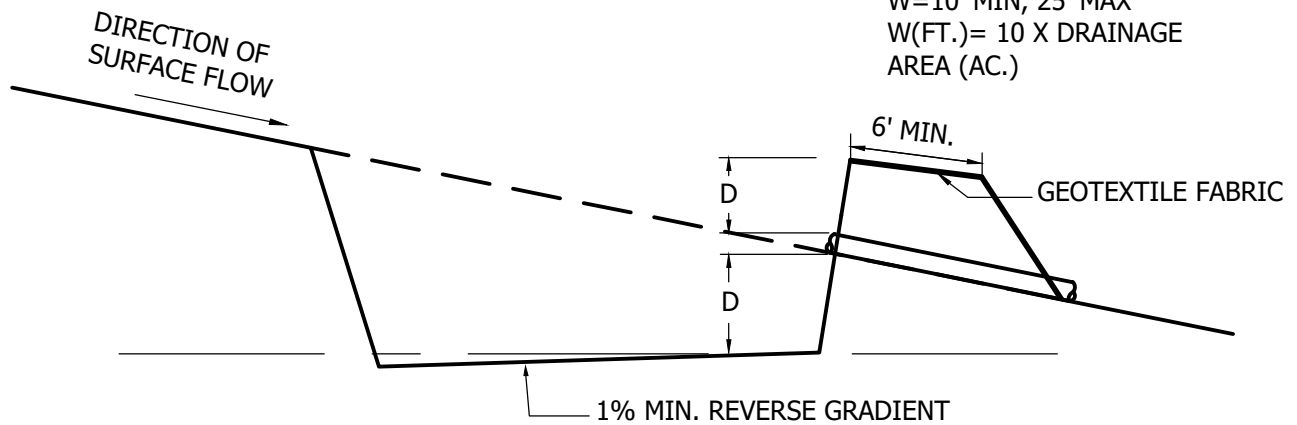
LAST REVISION:  
Jan. 2005

PLATE NO.  
ERO-8B

## I. PLAN VIEW



## II. SECTION A-A



NOTE:  
D=2' MIN, 4' MAX  
W=10' MIN, 25' MAX  
W(FT.)= 10 X DRAINAGE  
AREA (AC.)



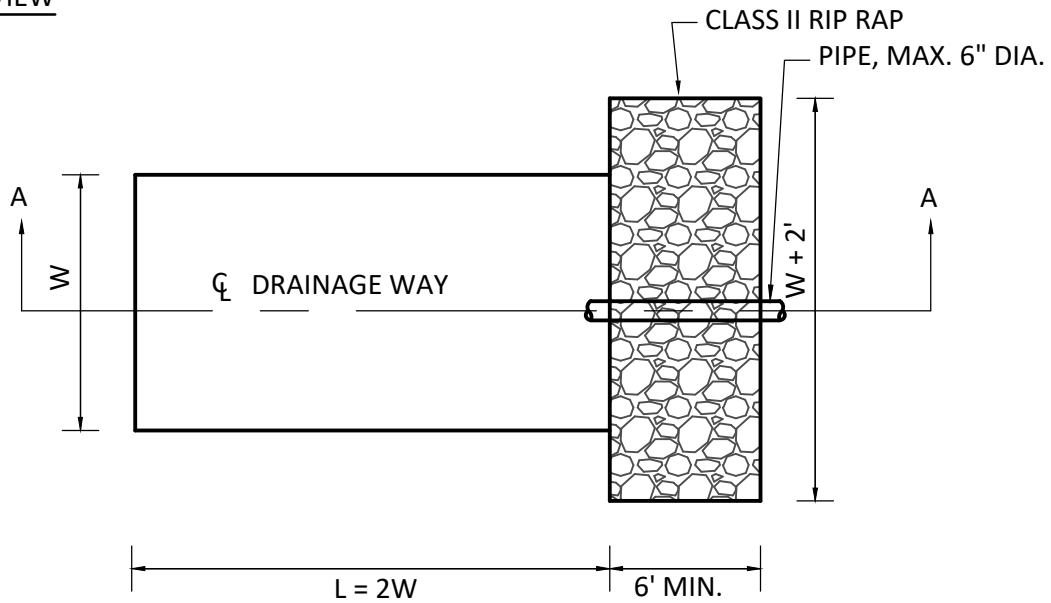
TEMPORARY SEDIMENT TRAP/BASIN

LAST REVISION:  
December 2016

PLATE NO.  
ERO-8C



## I. PLAN VIEW



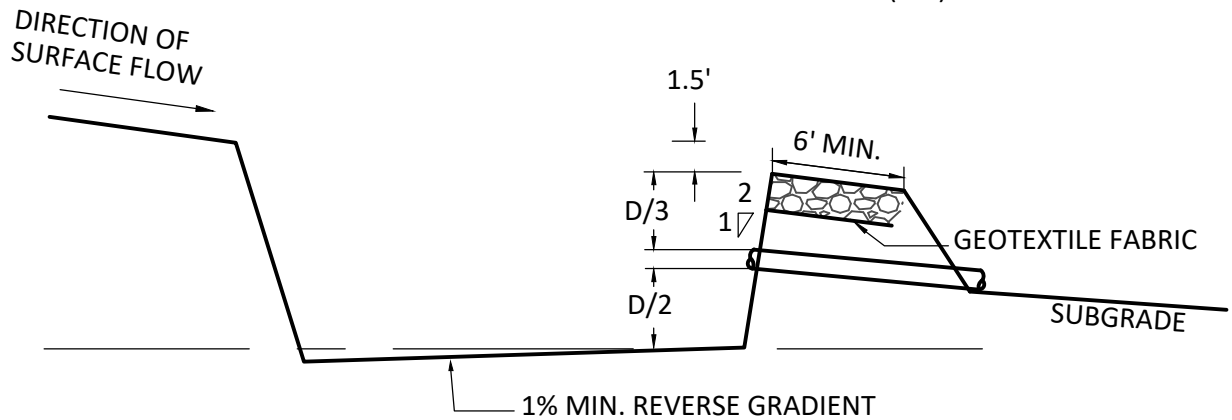
### NOTE:

D=3' MIN, 5' MAX

W=10' MIN, 25' MAX

W(FT.)= 10 X DRAINAGE  
AREA (AC.)

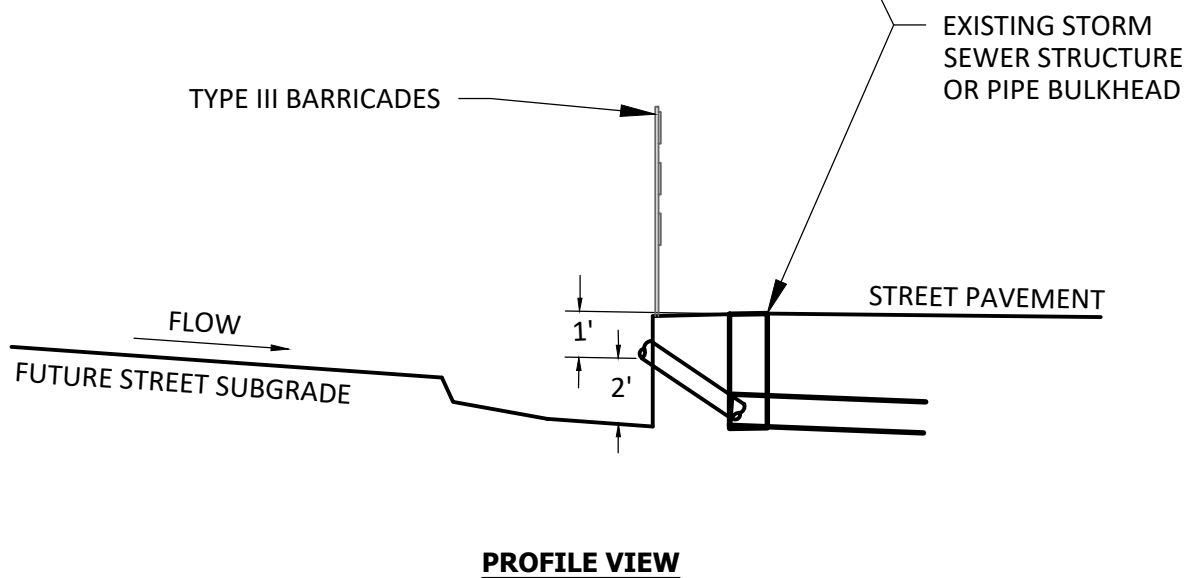
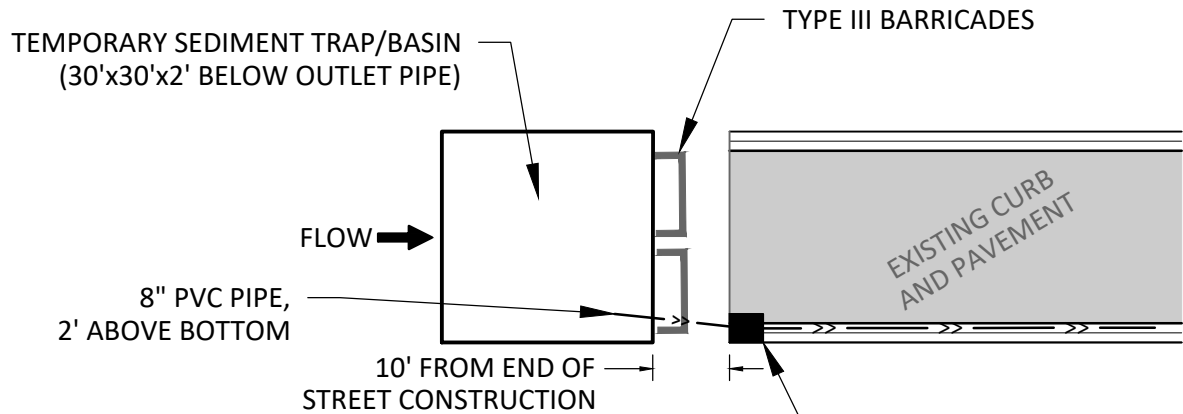
## II. SECTION A-A



## TEMPORARY SEDIMENT TRAP / BASIN WITH RIP RAP

LAST REVISION:  
November 2017

PLATE NO.  
ERO-8D

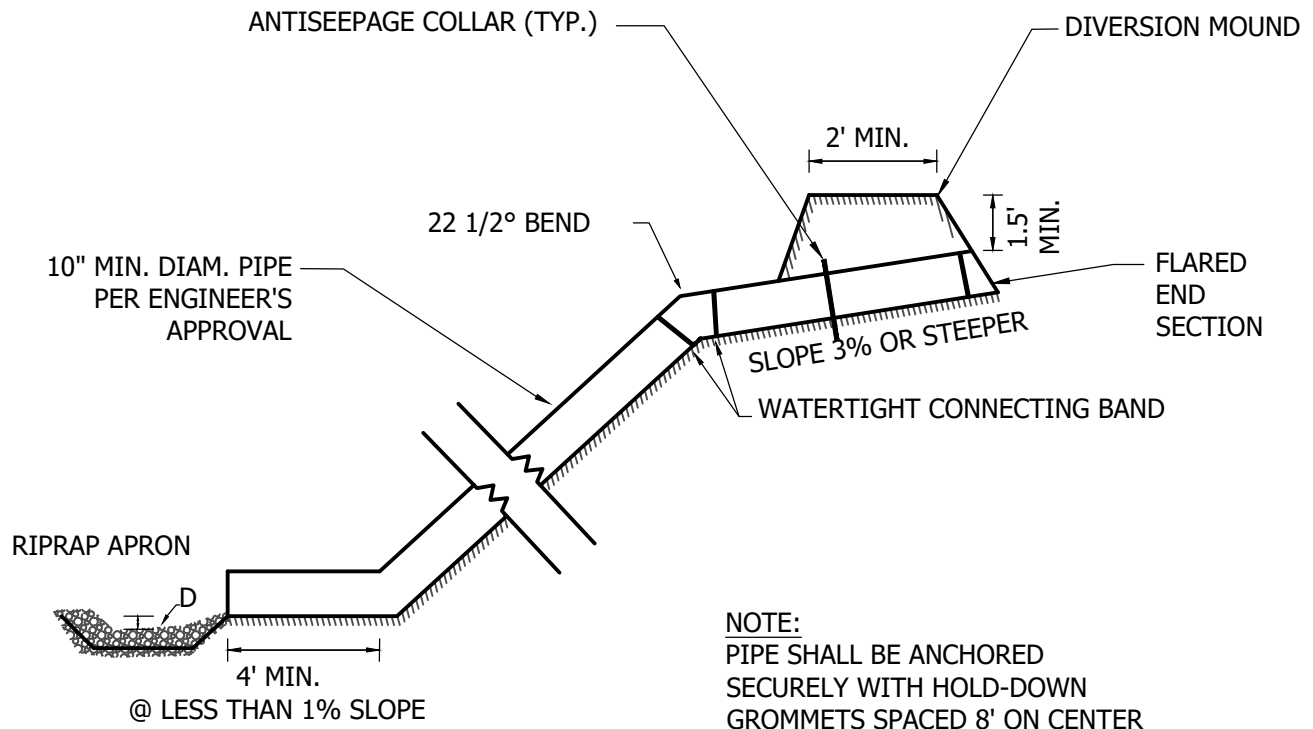


## TEMPORARY SEDIMENT TRAP/BASIN ON FUTURE STREET SUBGRADE

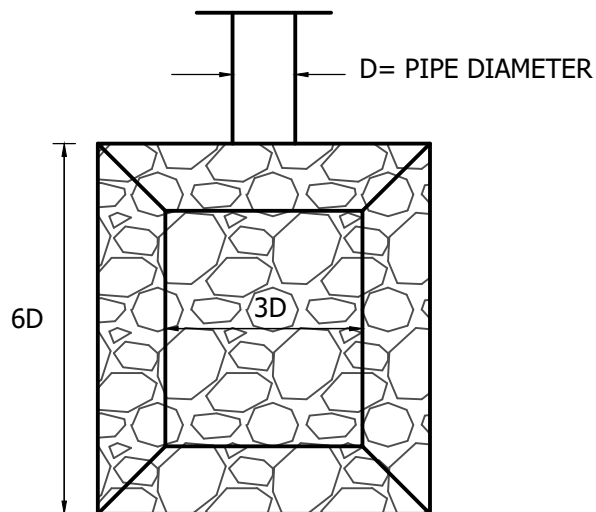
LAST REVISION:  
November 2017

PLATE NO.  
**ERO-8E**

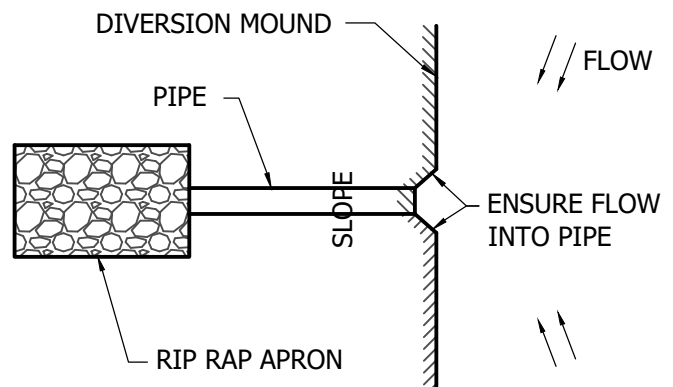
## PROFILE VIEW



## RIPRAP APRON PLAN



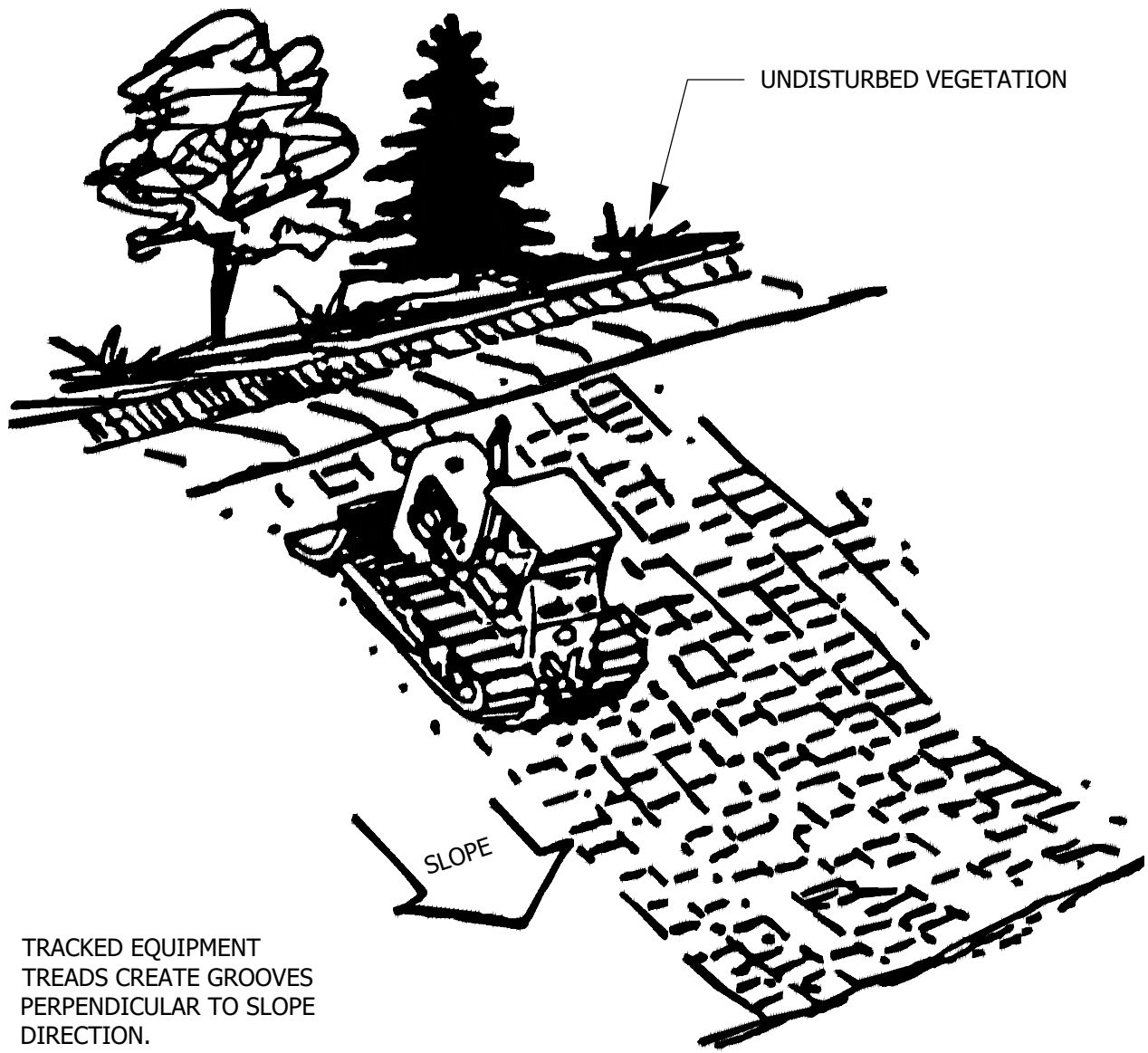
## PLAN VIEW



## DIVERSION MOUND AND TEMPORARY PIPE DOWNDRAIN

LAST REVISION:  
Jan. 2005

PLATE NO.  
ERO-10



TRACKED EQUIPMENT  
TREADS CREATE GROOVES  
PERPENDICULAR TO SLOPE  
DIRECTION.

NOTE:

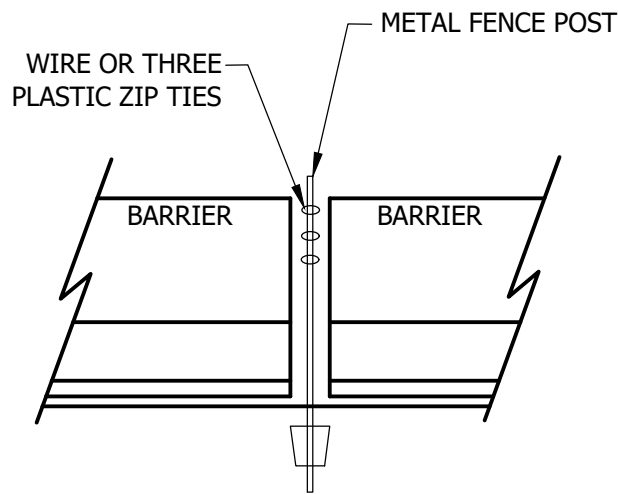
ALL SLOPES WITH A GRADE EQUAL TO OR STEEPER THAN 3:1  
REQUIRE SLOPE TRACKING. SLOPES WITH A GRADE MORE GRADUAL  
THAN 3:1 REQUIRE SLOPE TRACKING IF THE STABILIZATION METHOD  
IS EROSION CONTROL BLANKET OR HYDROMULCH.



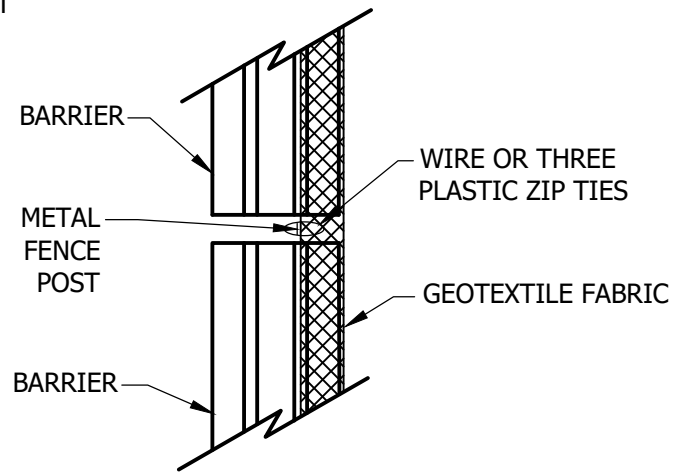
## SLOPE TRACKING

LAST REVISION:  
Mar. 2004

PLATE NO.  
ERO-11

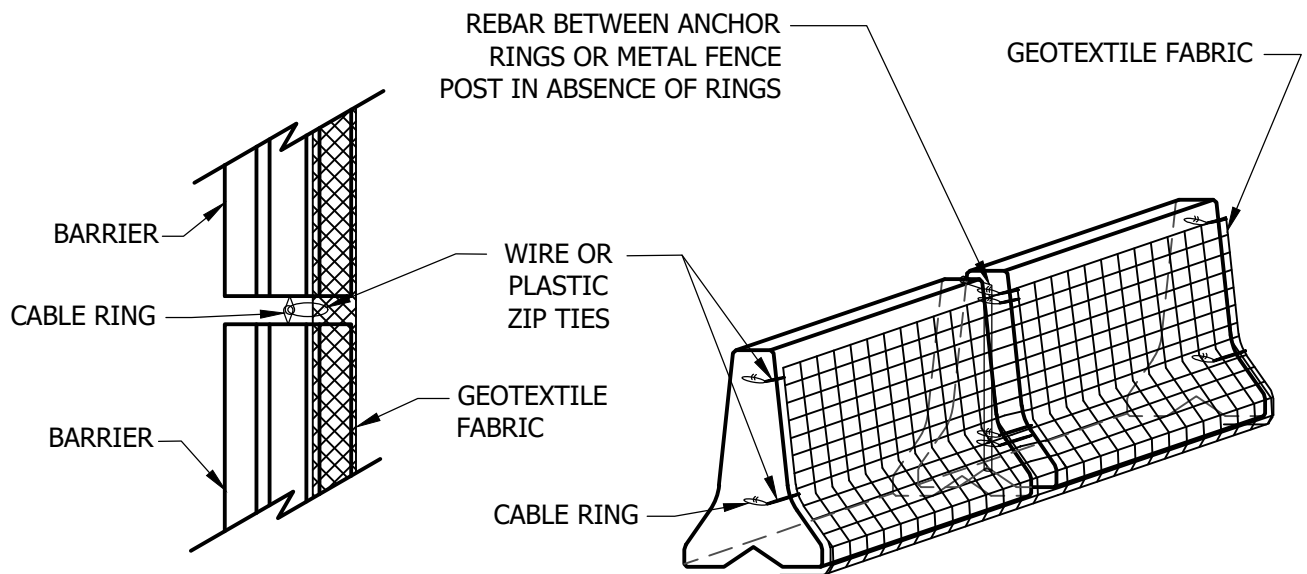


SIDE VIEW



TOP VIEW

### BARRIER WITHOUT CABLE RINGS



TOP VIEW

3D VIEW

### BARRIER WITH CABLE RINGS SILT FENCE, SUPER DUTY

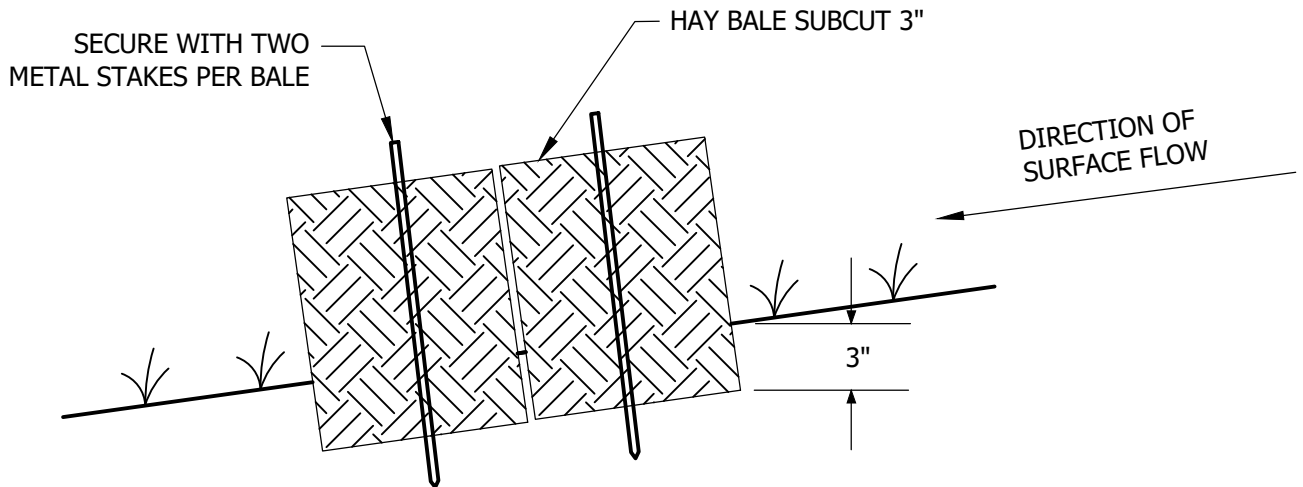


SUPER DUTY PERIMETER CONTROL  
SILT FENCE / CONCRETE BARRIER  
SYSTEM

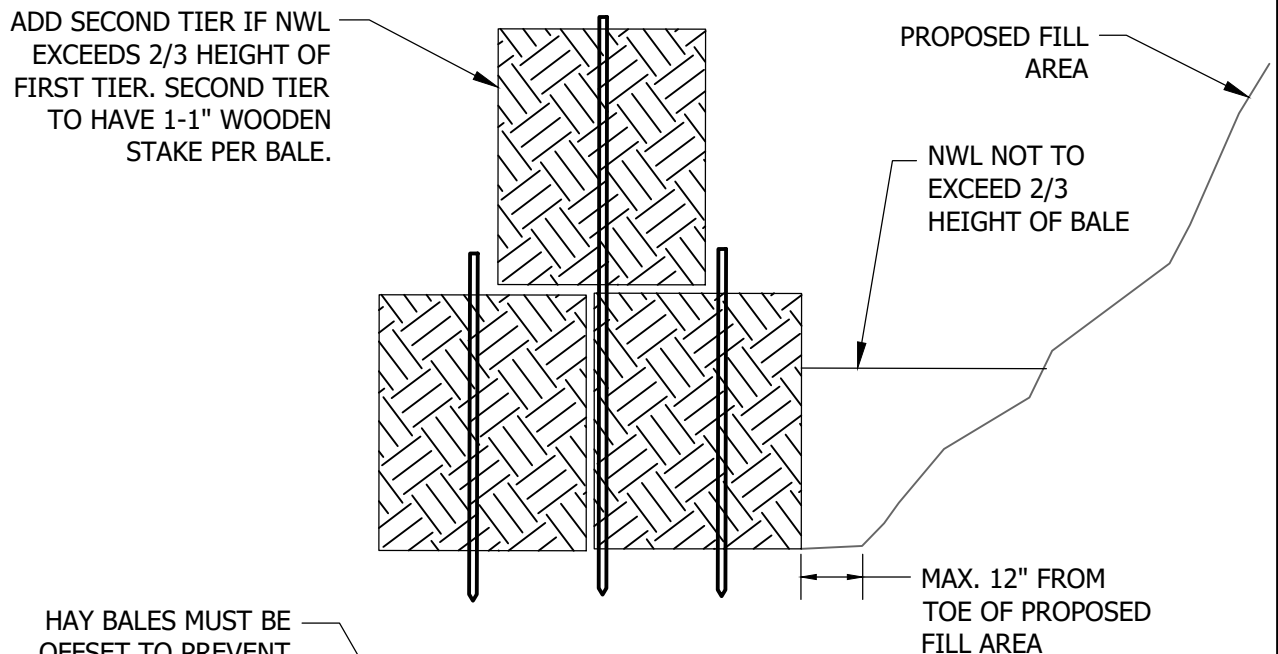
LAST REVISION:  
March 2008

PLATE NO.  
ERO-12A

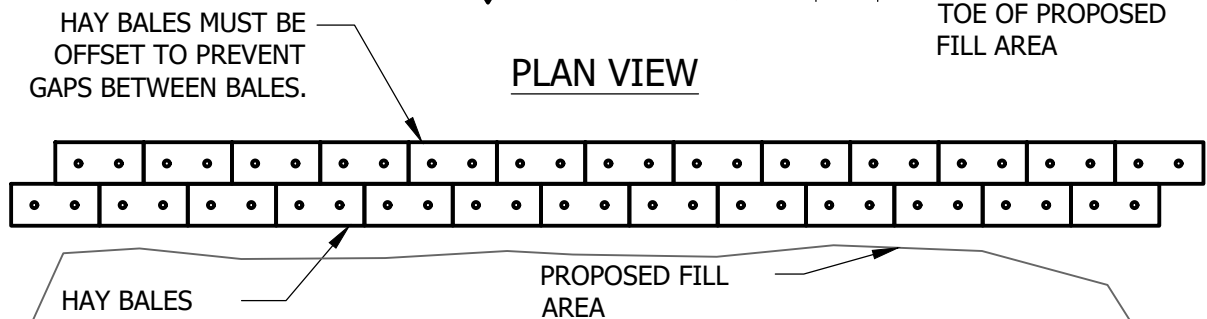
## PROFILE VIEW-UPLAND PERIMETER CONTROL



## PROFILE VIEW-PERIMETER CONTROL IN SHALLOW STANDING WATER



## PLAN VIEW



PERIMETER / SEDIMENT CONTROL  
HAY BALES

LAST REVISION:  
Jan. 2005

PLATE NO.  
ERO-12C

# INDEX

City  
Plate  
No.

## SECTION 8 - GRADING

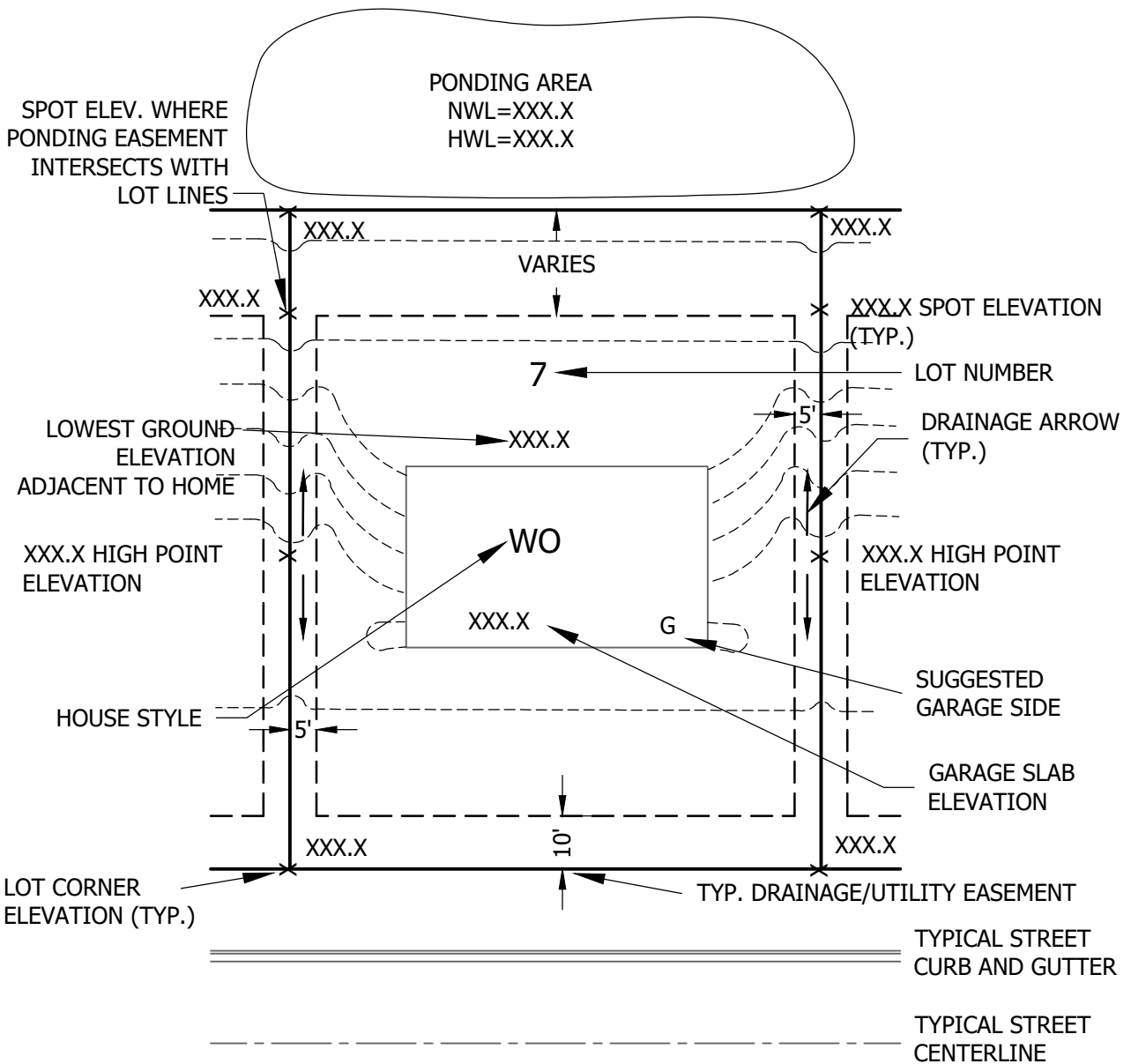
GRD-1	REQUIRED LOT GRADING INFORMATION
GRD-2	REQUIRED LOT GRADING INFORMATION
GRD-3	REQUIRED LOT GRADING INFORMATION
GRD-4	REQUIRED LOT GRADING INFORMATION
GRD-5	EMERGENCY OVERFLOW DETAIL
GRD-6	ORANGE CONSTRUCTION SAFETY FENCE



## SECTION 8 - GRADING INDEX

LAST REVISION:  
Dec. 2003

PLATE NO.

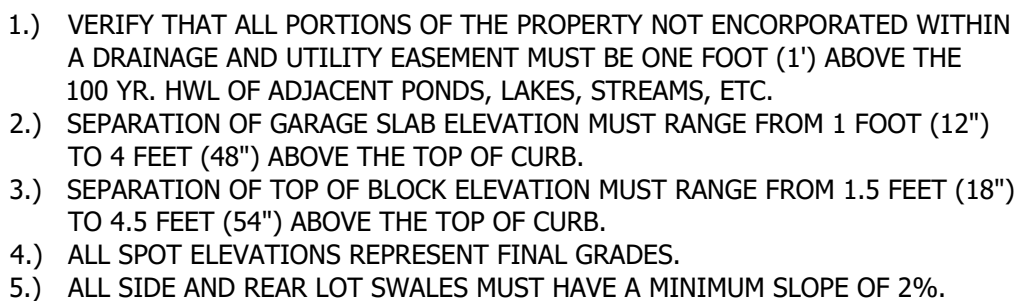


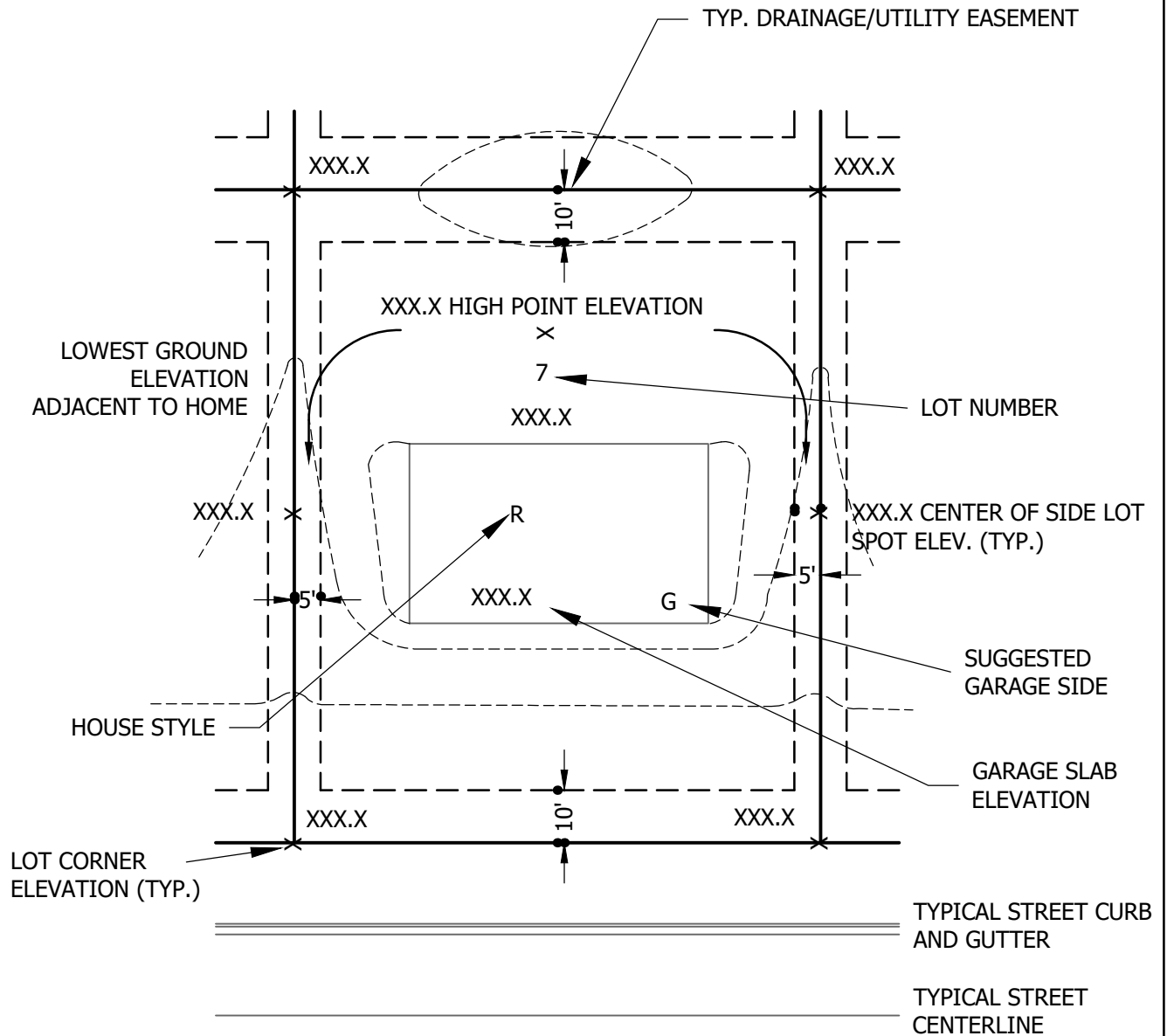
## REQUIRED LOT GRADING INFORMATION

LAST REVISION:  
Feb. 1999

PLATE NO.  
GRD-1







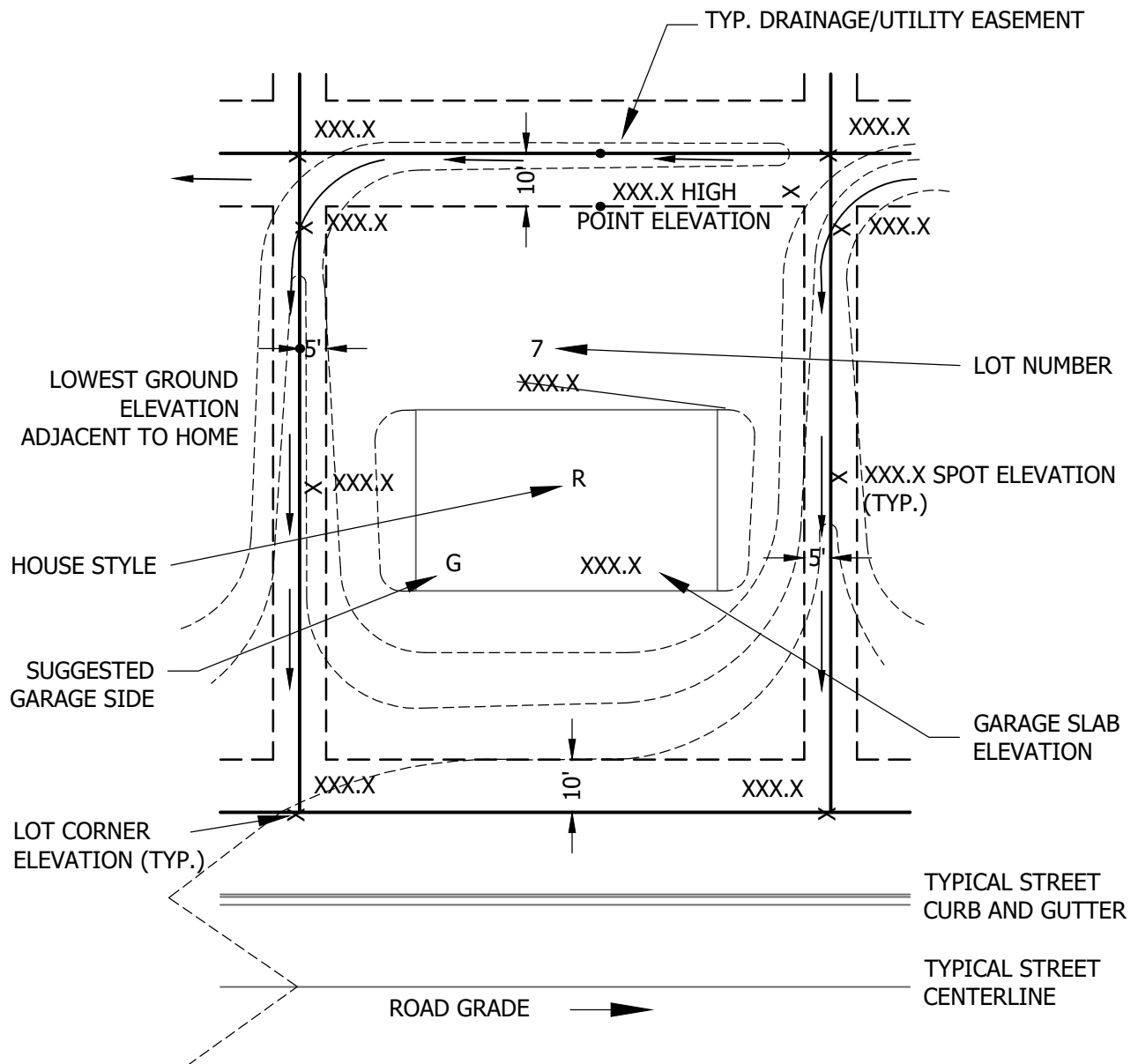
- 1.) VERIFY THAT ALL PORTIONS OF THE PROPERTY NOT INCORPORATED WITHIN A DRAINAGE AND UTILITY EASEMENT MUST BE ONE FOOT (1') ABOVE THE 100 YR. HWL OF ADJACENT PONDS, LAKES, STREAMS, ETC.
- 2.) SEPARATION OF GARAGE SLAB ELEVATION MUST RANGE FROM 1 FOOT (12") TO 4 FEET (48") ABOVE THE TOP OF CURB.
- 3.) SEPARATION OF TOP OF BLOCK ELEVATION MUST RANGE FROM 1.5 FEET (18") TO 4.5 FEET (54") ABOVE THE TOP OF CURB.
- 4.) ALL SPOT ELEVATIONS REPRESENT FINAL GRADES.
- 5.) ALL SIDE AND REAR LOT SWALES MUST HAVE A MINIMUM SLOPE OF 2%.



## REQUIRED LOT GRADING INFORMATION

LAST REVISION:  
Feb. 1999

PLATE NO.  
GRD-3



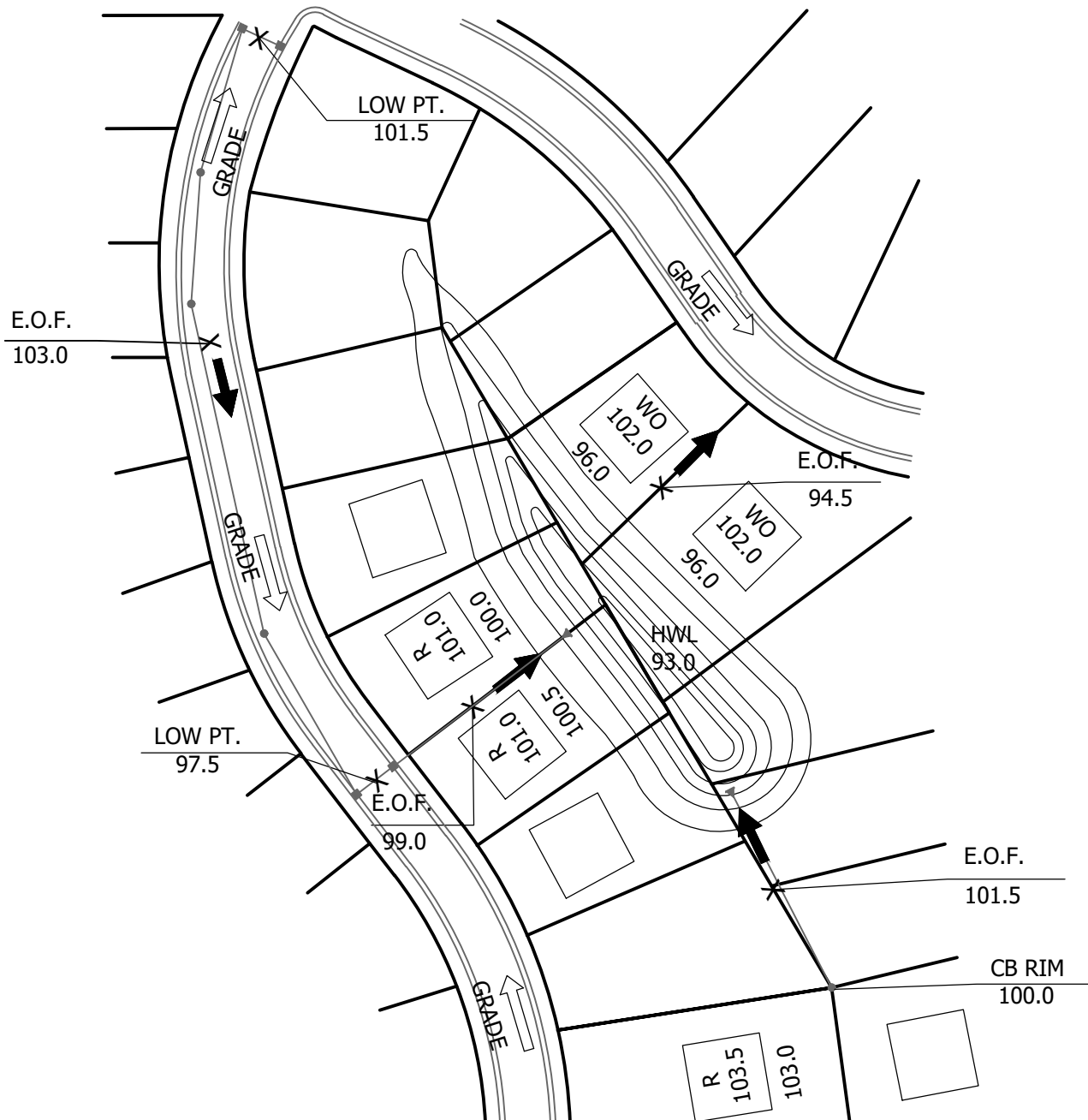
- 1.) VERIFY THAT ALL PORTIONS OF THE PROPERTY NOT INCORPORATED WITHIN A DRAINAGE AND UTILITY EASEMENT MUST BE ONE FOOT (1') ABOVE THE 100 YR. HWL OF ADJACENT PONDS, LAKES, STREAMS, ETC.
- 2.) SEPARATION OF GARAGE SLAB ELEVATION MUST RANGE FROM 1 FOOT (12") TO 4 FEET (48") ABOVE THE TOP OF CURB.
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- 4.) ALL SPOT ELEVATIONS REPRESENT FINAL GRADES.
- 5.) ALL SIDE AND REAR LOT SWALES MUST HAVE A MINIMUM SLOPE OF 2%.



## REQUIRED LOT GRADING INFORMATION

LAST REVISION:  
Feb. 1999

PLATE NO.  
GRD-4



**NOTE:** EMERGENCY OVERFLOW HIGH POINT ELEVATIONS AND DIRECTIONS OF FLOW MUST BE SHOWN FOR ALL STREET AND REAR YARD CATCH BASINS, PONDS, LAKES, WETLANDS, DITCHES AND STREAMS. A MINIMUM EIGHTEEN INCHES (18") SEPARATION MUST BE MAINTAINED BETWEEN E.O.F. HIGH POINTS AND THE LOWEST GROUND ELEVATION ADJACENT TO SURROUNDING HOMES OR BUILDINGS. A MAXIMUM 18" SEPARATION MUST BE MAINTAINED BETWEEN THE STREET CENTERLINE LOWPOINT ELEVATION AND THE E.O.F. HIGH POINT. ALL SIDE AND REAR LOT SWALES MUST HAVE A MINIMUM SLOPE OF 2%.



## EMERGENCY OVERFLOW DETAIL

LAST REVISION:  
March 2013

PLATE NO.  
GRD-5

